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Feedback for learning: closing the assessment loop

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www.feedbackforlearning.org

Feedback for Learning
Closing the assessment loop



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Executive summary

Project context

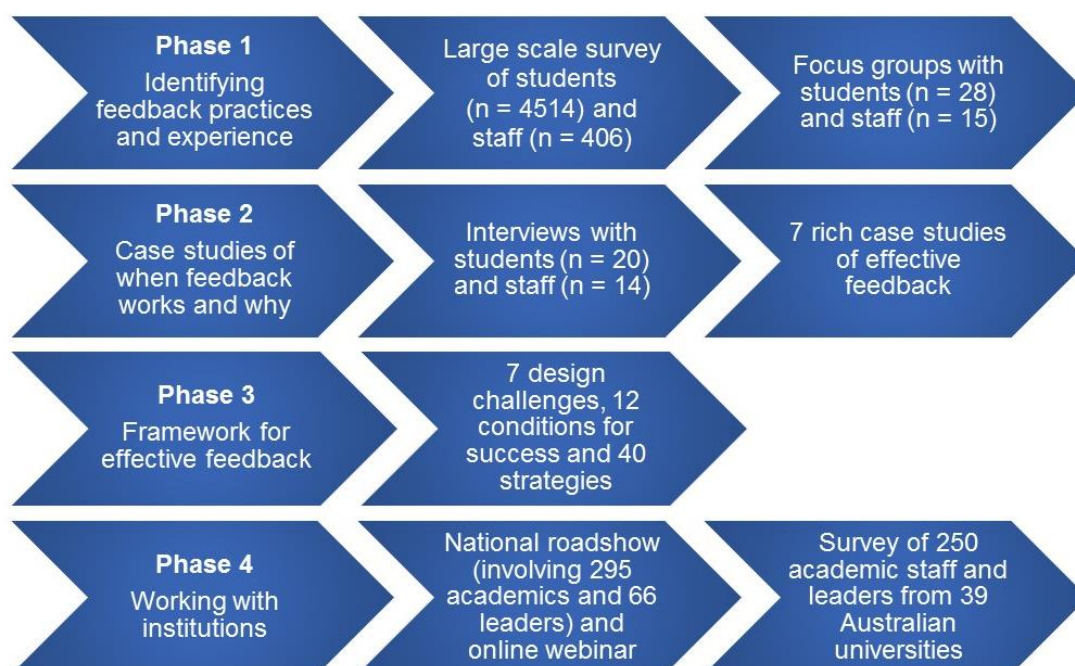
Assessment feedback for learning is the lynchpin to students' effective decision-making and the basis of improved learning outcomes. However, feedback is underutilised and often misunderstood by both students and educators. Although there exists a surfeit of models, frameworks, principles and strategies in the extensive literature exploring feedback for learning, no single feedback strategy or model has been shown to work across all contexts. In response, this project set out to identify examples of successful feedback practices and, importantly, to investigate the underlying conditions and contextual factors that make them successful.

Aims

This project aimed to improve student, educator and institutional capacities to design, stimulate and leverage assessment feedback. To support this goal, the project delivered empirically based resources of feedback designs and conditions to guide educators, academic developers and instructional designers, as well as institutional policy.

Approach

The project involved four phases of activity. Across the 18 months of the project, almost 6000 students and educators participated in surveys, focus groups, interviews, workshops and webinars.



Project outputs

This project involved a number of outputs, including resources that have been purposely designed to support educators, academic developers and leaders in improving feedback practices. Key outputs include:

- Website created to host project details, findings and resources as they are developed: www.feedbackforlearning.org
- Statistical data and infographics shared via the project website, revealing patterns of feedback strategies and their reported strengths, weaknesses, and impact across diverse contexts (e.g. programs and disciplines).
- Seven rich cases of effective feedback, featuring downloadable PDFs and high-quality videos designed to be useful for educators wanting to adopt similar approaches.
- A framework of effective feedback, including a new definition of feedback, seven design challenges, 12 underlying conditions that support successful implementation of feedback, and 40 strategies for addressing those conditions.
- Professional learning resources including presentation slides, a recorded webinar, handouts and illustrations that support educators, academic developers and leaders to engage and use the case studies and framework.
- Workshops in six capital cities, with 295 academics and 66 senior university leaders actively designing how they might implement the project outcomes.
- Dissemination across the higher education sector via public media, such as an article in *The Conversation*, and 32 local, national, and international keynotes, masterclasses, workshops, seminars and webinars. In addition, four peer-reviewed scholarly publications are published, accepted, or in press (with a further two currently under review), and five papers were presented at national and international conferences (a further four papers are scheduled for later in 2018).

Project impact

This project was driven by a desire to impact on the higher education sector as a whole. Consequently, considerable time was invested in developing high-quality resources, including the case studies and framework, and working with stakeholders through workshops, roundtables and webinars. The research phases were extensive, with almost 6000 students, educators, academic developers, designers and senior leaders directly involved. The project also engaged with the broader higher education community (i.e. beyond the project participants) through dissemination of the findings, including infographics and ‘first glimpses of data’ shared via the project website, social media updates, engagement with popular media, and webinars. Dissemination of the project findings has also occurred through journal articles, conference presentations, seminars and workshops. Because the project resulted in rich data sets, dissemination work will continue into 2018 and beyond. The project website will be updated to reflect this ongoing work, and will host the project deliverables until at least 2023.

Key findings

Phase 1

Overall, the findings from the large-scale survey and focus groups were largely positive, which highlights the success of recent investments made by the higher education sector. However, there is room for improvement in certain areas of current feedback practices. These include the need for sensitivity to individual student needs, ensuring that students have opportunities to enact feedback on a connected assessment task, encouraging students to seek feedback comments prior to submission, and working with students to leverage different sources of feedback comments (including from peers, family, and friends).

Phase 2

From the rich data sets developed from phase 1, seven diverse examples of ‘promising’ or ‘best’ practice were identified from different subjects and courses across the two universities. These case studies highlighted a range of innovative and highly effective feedback designs, including flipped models, the use of diverse sources and modes, moderation, and consistency of academic staff and processes.

Phase 3

Drawing on the rich case studies, and informed by feedback literature and consultations with the reference group, project team and external evaluator, this phase saw the creation of a framework for effective feedback. It has been designed to provide educators, designers and leaders with a clear vision of what effective feedback is, the challenges they need to consider in the design of feedback systems, the underlying conditions that support the development of effective feedback practices, and strategies to enact the conditions.

Phase 4

This phase involved extensive dissemination of the findings from the previous phases, including a national series of workshops with 295 participants and a webinar with 131 participants. A follow-up survey indicated that dissemination sessions offered by the project team were impactful. The vast majority of attendees reported that they now think differently about feedback, intend to use the information to change their own practice, and intend to share the information with their colleagues. Senior leadership from 34 of 41 Australian universities also rated the 12 conditions for success as important and felt that they are being implemented to varying degrees, but also confirmed that it is a long process.

Next steps

The project findings have revealed many areas that need further investigation and investment. The most critical of these is the need for coherent and measurable programmatic designs – that is, the explicit linking of feedback loops to subsequent assessments within and across subjects.

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1. Introduction

1.1. Rationale

Feedback is important for learning

Feedback (during and after assessment tasks) is critical for effectively promoting student learning. Without feedback, students are limited in how they can make judgements as to their progress, and how they can change their future performance. Feedback is the lynchpin to students' effective decision-making, and the basis of improved learning outcomes. However, feedback is underutilised and often misunderstood by both students and educators. This project aimed to improve student learning (and experience) through improving institutional, educator and student capacities to stimulate and leverage assessment feedback.

There is consensus in the research literature that feedback is inseparable from the learning process, with notable researchers even arguing that feedback is the most powerful single influence on student achievement (Hattie & Timperley, 2007; Orrell, 2006; Orsmond & Merry, 2011). Moreover, the literature indicates that assessment feedback is distinct from other forms of feedback such as in-class feedback (Biggs, 2003; Boud, 2000; Costello & Crane, 2010; Crook et al., 2012). Critically, the literature takes the view that, to be effective, feedback needs to be more than a number or letter grade and provide 'qualitative information' about performance that is acted upon by the student or educator (Joint Information Systems Committee, 2010, p. 56). Feedback is central to students' orientation to learning (McConnell, 2006) and contributes to the quality of the student experience (a particular concern for the higher education sector), improves motivation, and facilitates students' development and future performance (Duncan, 2007; Higgins, Hartley, & Skelton, 2001; Lizzio & Wilson, 2008).

The problem is that feedback is poorly understood and poorly executed across the sector (Boud & Molloy, 2013; Carless et al., 2011). Carless et al. (2011) argue that 'there is an increasing body of evidence that current feedback practices are not fit for purpose' (p. 395). This is borne out by national surveys in Australia and the UK telling us that student dissatisfaction with feedback is one of the most problematic aspects of the student experience (Carroll, 2014; Higher Education Statistics Agency, 2017). Research indicates that while academics perceive their feedback comments to be important and useful, in comparison students largely report them as difficult to understand, ambiguous or unusable (Henderson & Phillips, 2015; Orrell, 2006; Walker, 2009). In addition, Carless et al. (2011) point out a significant compounding factor: 'Students have seldom been trained or supported in how to use feedback ... and often rely on relatively unsophisticated strategies for using feedback' (p. 395). Little wonder, then, that lecturers feel their feedback efforts are wasted (Bailey & Garner, 2010; Crisp, 2007; Orsmond & Merry, 2011).

Why feedback is currently poorly understood and poorly executed

The dominant understanding of feedback in higher education is that it occurs when academics provide comments to students in relation to an assignment. There is an underlying assumption that feedback is a one-way flow of information which happens only once and in isolation from any other event, and that its role is often indistinguishable from justifying the grade. However, this conception of feedback is not the way feedback is characterised by researchers in the field (Boud & Molloy, 2013; Carless et al., 2011; Sadler, 2010), who define feedback as a participatory process in which feedback is not 'given to' or 'done to' the learner.

This argument is relatively simple if educators accept that students are active participants in their learning. For example, when students explore a concept or practise a skill as they work towards an assessment goal, it is argued that they can benefit from feedback mechanisms that help them make judgements about their performance. Feedback is a consequence of performance but it does not necessarily come last. Hattie and Timperley (2007) conceptualised feedback as 'information provided by an agent (e.g. teacher, peer, book, parent, self, experience) regarding aspects of one's performance or understanding' (p. 81). However, Boud and Molloy (2013) argue that feedback also necessarily requires some action or change to occur. Feedback that has no impact on learning is simply information. Moreover, it has been well argued by leading researchers that feedback should not be seen as something that is done to students (Boud & Molloy, 2013; Carless et al., 2011; Hattie, 2009; Nicol, Thomson, & Breslin, 2014).

Feedback as a participatory process can occur in a variety of ways. It includes the process by which students, through their assessment, provide educators with information that influences subsequent pedagogical decisions. It can also be seen as a process in which students actively seek specific information (from an educator or other source) to help them judge their performance in relation to their goals, so they can better achieve their desired outcome. The significance of this is that effective feedback processes are intimately related to the ability of the learner to understand, judge and act on the information. A problem then arises: how do institutions, educators and students develop their ability to seek, give, receive and act on feedback?

No single feedback strategy or model has been shown to work across all contexts. The ecology of the learning context, including differences across educators, students, activity, assessment, discipline, institution, time and place, vary in every instance. This includes policy, workload pressures, academic and student culture, and other broader sociopolitical issues that can significantly influence, including subverting or hindering, what might otherwise be an effective feedback strategy. It is no wonder that simple strategies of feedback cannot be replicated successfully from one context to another. With this in mind, this project is innovative in its approach to this contextual diversity.

1.2. Aim and challenges

The aim of this project is to enhance student learning and experience by improving the way in which the Australian higher education sector enacts feedback. The project approach delivers an empirically based *framework of effective feedback* to guide educators, academic developers and instructional designers, as well as institutional policy. This is supported by large-scale data highlighting patterns of success, and seven rich cases of feedback designs to demonstrate how that success can be achieved. In addition, this project facilitated the likelihood of adoption through a series of dissemination activities including national workshops built on a participatory design approach.

Feedback is not something educators just do to students. It is couched in institutional policy, academic culture, teaching practices and studying habits. As a result, the *framework of effective feedback* and its conditions for success cater for institutional, educator and student perspectives. Importantly, this project considers feedback to be a process within a complex system, in which there is no single strategy that can be employed across all contexts. The ‘ecological’ variations need to be considered in any feedback design, whether it is at the level of classroom practices or instructional policy. Therefore, this project adopted a socioecological approach by identifying examples of success, and the contextual factors that have contributed to the development of that success. This project was driven by the following challenges:

- **What are the current assessment feedback practices and which of these lead to improved student performance?**

What feedback strategies and designs are educators and students employing – including new and emerging forms such as automated approaches? How is success of feedback recognised and judged by educators, students and institutions? What assessment practices/types are they linked with? What differences are apparent within and between these groups and how do these relate to leading research on feedback models? In the age of massified higher education, what is the role of digital technology in facilitating best practice?

- **Why are some forms of these practices successful?**

What are the characteristics and contexts of successful feedback? Why do these practices ‘work’ from a pedagogical perspective, as well as wider social and institutional perspectives? How are they sustained over time? What are the barriers and conditions for success that shape the effective engagement of educators and students in feedback mechanisms?

- **How can effective feedback best be designed to promote learning?**

What framework or frameworks best support sustained planning and engagement with effective feedback designs at the activity/task level, unit level, course level and institutional level?

- **How can the circumstances of successful feedback for learning be replicated and sustained across and within Australian universities?**

What longer-term strategic change in higher education institutions is required?

It should be noted that these challenges are complex, and the project team engaged in this project with the assumption that there are no simple solutions.

1.3. Project approach

This project stands out from previous work by adopting fresh and innovative ways to tackle the critical need for improving feedback. It provides large-scale quantitative and rich qualitative evidence of current diversity in successful feedback practices, including new and emerging forms supported by digital technologies, evolving course structures and assessment models. It adopts an ecological perspective in understanding why feedback is so difficult to get right. It builds on and encapsulates the models and recommendations developed by others, and offers an innovative framework that guides institutions, learners and educators in their choices.

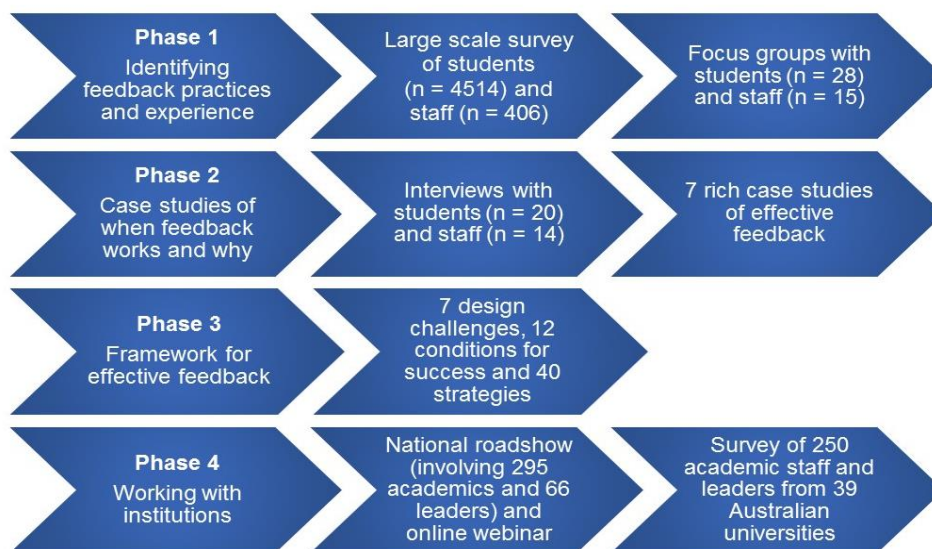


Figure 1. Project phases

This 18-month funded project was designed to align four phases of activity with the four challenges above. During this project, almost 6000 students and university staff have been involved in the four phases.

Phase 1: Identifying feedback practices and experiences

The first phase of the project involved examining how feedback is actually being used, its impact on student experience and learning, and, ultimately, the identification of patterns of success that were used to triangulate best practice case studies for phase 2. This involved the in-depth mapping of assessment feedback practices across two 'case study' universities covered by the project team (Monash University and Deakin University) using a large-scale

survey and focus groups. While not wholly generalisable, these findings are of direct relevance to institutions throughout the higher education sector.

- **Stage 1a – Large-scale surveys:** This stage involved an online [survey](#) of students and staff in the two universities. Recruitment targeted a spread of demographics (including year/graduate level), disciplines, type of assessment and variations in feedback strategies.
- **Stage 1b – Focus groups:** Follow-up focus group interviews were then conducted with staff and students from the two universities to provide clarity on emerging themes from the survey and to identify the ecological issues surrounding successful feedback practices. In order to ensure a breadth of opinion and experience the participants were drawn from undergraduate and graduate courses across a variety of science, technology, engineering and mathematics (STEM) and non-STEM fields, including health sciences.

Phase 2: Case studies of when feedback works, and why

The project then explored when and why feedback practices are successful. The purpose of this phase was to provide rich and compelling evidence of successful feedback designs and the ecology that surrounded this success, including the history of development, policy and change. This second phase involved two stages:

- **Stage 2a – Cases of effective feedback:** From the rich datasets developed from Phase 1, seven diverse examples of ‘promising’ or ‘best’ practice were identified from different subjects and courses across the two universities, and examined in detail. These included cases that were clearly reported as having an impact on student learning outcomes and student experience.
- **Stage 2b – Development of resources:** In order to support the dissemination of project findings, the case studies were synthesised into advice for educators and leaders. They also include professionally recorded videos of the educators and researchers explaining key characteristics and the evolution of the designs.

Phase 3: Framework for effective feedback

The project then drew on the findings from Phases 1 and 2, with reference to the existing literature, to develop a framework to support effective feedback design. This third phase involved two stages:

- **Stage 3a – Development of framework:** This stage included three days of initial workshopping with the project team and the external evaluator, who is himself an internationally renowned expert in the field of feedback in higher education. The evaluator provided ‘arms-length’ critical feedback of the emerging framework and offered insights, ways forward and connections with other work. The project team then continued to meet to workshop and refine the framework. The reference group was also invited to engage with the emerging framework.

- **Stage 3b – Expert group consultations (Monash and Deakin universities):** Consultations were held with various leaders (i.e. PVCs and Associate Deans of Education across faculties) separately at Monash University and Deakin University. This stage supported the push for ‘narrow systemic adoption’ by encouraging the participating institutions’ policymakers and early adopters to engage and ‘make real’ the project findings. These consultations informed the refinement of the framework from a strategic point of view prior to the national workshops in the next phase.

Phase 4: Working with institutions

The project then sought to distribute the findings to academics, educational designers, academic developers and senior academic leadership throughout Australia. The process of engaging with key stakeholders also enabled the project team to review and strengthen the framework and project resources. This phase included four stages:

- **Stage 4a – Participatory design workshops:** This stage engaged key stakeholders via workshops in which participants meaningfully interrogated the framework and resources in relation to their own context. At the same time, their engagement fed back to the project team further information and examples to strengthen the framework and improve the impact of the professional learning resources. The workshops presented the patterns of success and barriers across disciplines from phase 1, rich cases of phase 2 and framework of phase 3 to strategic leaders (such as managers of learning and teaching units), as well as academic developers and other change-makers and early adopters in Australian universities.
- **Stage 4b – Leadership roundtables:** Leaders from six Australian universities were invited to attend a roundtable with members of the project team, summarising the key findings and ‘take-home messages’ from the four phases of the project. The focus of the roundtables was on disseminating an understanding of how the framework and accompanying resources could be used to support systematic change in leaders’ universities. The discussion was designed to not only support the impact on local policy, but also further refine the way in which the framework can be represented to leaders across the sector.
- **Stage 4c – Public webinar:** This stage extended the availability and reach of the project findings and framework by engaging educators who were unable to attend a roadshow event (e.g. because they were from a regional or international university, or their local event was full). The webinar offered a brief masterclass of feedback designs and discussed current educator and student experiences of feedback, along with strategies to develop and support effective feedback designs. The webinar was recorded and made available via the project website for those unable to join the live webinar, and it continues to amass views.
- **Stage 4d – Evaluating the feedback sessions and conditions for success:** Feedback session attendees were contacted and asked to complete a short survey evaluating the impact of the feedback sessions and rating the importance and level of implementation of the 12 conditions for success. Senior leaders from every Australian university were also invited to evaluate the conditions for success.

2. Project findings

2.1. Phase 1: Identifying feedback experiences and practice

Phase 1 identified patterns of success across diverse practices and contexts, as well as how they align with current theory. Importantly, phase 1 also enabled the identification of case studies for phase 2.

To assess the diversity of feedback experiences of higher education students, a large-scale online survey was conducted between September 2016 and January 2017 at Monash University and Deakin University. This survey targeted staff and coursework students, and included a mix of closed and open-ended questions focusing on the types of assessment and feedback used in semester 2, 2016 at Monash University, and trimester 3, 2016/2017 at Deakin University. Valid survey responses were received from 4920 staff and students. Descriptive information about the demographics of university students and staff are provided in Tables 1 and 2. The sample of students was representative of Australian higher education students with respect to key demographics.

Table 1. Key demographics for staff survey respondents (n = 406)

Demographic	Percentage breakdown
Institution	50% Monash University 50% Deakin University
Gender	63% female 36% male 1% unspecified
Role	91% involved in assessing students (e.g. lecturers, tutors) 6% provide assessment support (e.g. educational designers) 3% other (e.g. professional staff)
Discipline	31% Arts and Education 15% Business and Law 31% Health 20% Science, Technology, Engineering and Mathematics 0.5% Art, Design, and Architecture 2.5% Other

Overall, the findings from the survey are largely positive, which highlights the success of recent investments made by the higher education sector. For example, students and staff recognised that feedback is about improvement. In addition, students overwhelmingly reported that the feedback comments they received at university were understandable, detailed, usable, and personalised. However, there are still certain areas of improvement:

- A concerning percentage of students reported feeling discouraged by feedback comments. This may be mitigated by being sensitive to the individual, focusing on areas to strengthen work, and providing students with opportunities to demonstrate improvement (e.g. through connected tasks).

- Students commonly complete exams at the conclusion of units, but they infrequently receive performance information beyond a grade. When this occurs, students miss out on valuable opportunities for improvement in subsequent units.
- Students desire feedback prior to submission, but may not go out their way to seek it without support and encouragement. As such, academic staff may need to find ways to elicit student performance earlier, to facilitate effective feedback processes. Students obtain feedback comments from a wide range of informal sources, including friends and family. Institutions may need to consider whether this has an impact on learning outcomes, and how they can support students to most effectively leverage these networks.

Table 2. Key demographics for student survey respondents (n = 4514)

Demographic	Percentage breakdown
Institution	67% Monash University 33% Deakin University
Gender	67% female 32% male 1% other/unspecified
Citizenship	70% domestic 30% international
Course type	67% undergraduate 33% postgraduate
Discipline	28% Arts and Education 25% Business and Law 23% Health 22% Science, Technology, Engineering and Mathematics 2% Art, Design, and Architecture
Attendance mode	82% full-time 18% part-time
Mode of study	82% on-campus 18% online

The following provides a summary of a selection of the phase 1 data. Due to the extensive nature of the data, these data are not intended to be exhaustive, but rather to present selected findings that offer insight into current practices and possible future initiatives. Therefore, the findings below focus on staff and student beliefs about the purpose of feedback, along with students' perceptions of feedback effectiveness and their experiences with diverse modes and sources of feedback.

Purpose of feedback

Staff and students completed an open-ended item that asked 'What is the purpose of feedback?' The responses of staff with assessment responsibilities ($n = 323$) and a representative sample of 400 students (including 200 students from each institution) were thematically analysed, and the results are presented in Figure 2. Three staff and 14 students from the sample did not respond to this question, and were excluded from analysis. As individual responses were assigned multiple codes; totals may exceed 100 per cent.

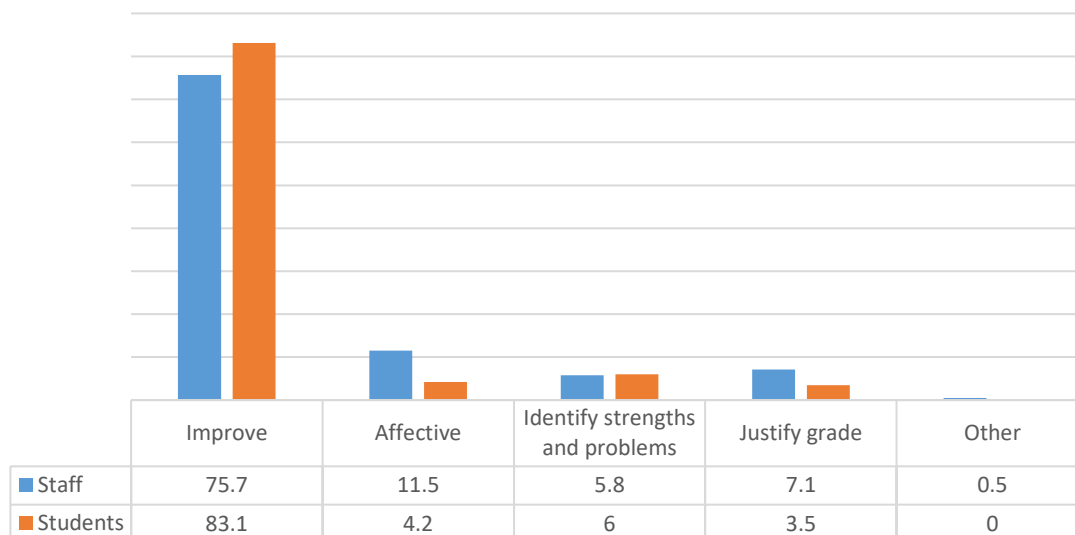


Figure 2. Percentage breakdown of staff and student perceptions of the purpose of feedback

As Figure 2 demonstrates, the majority of both staff and students were clear that the purpose of feedback should be to improve. Interestingly, a much higher proportion of staff were likely to suggest that feedback should serve an affective purpose, such as offering students praise or encouragement. A higher proportion of staff than students also mentioned that the purpose of feedback is grade justification. These results suggest that the majority of staff and students understand that improvement is a critical aspect of feedback. However, it is interesting to note that students were less likely than staff to hold the opinion that the purpose of feedback is to provide affective comments to students and to justify grades.

There were many subthemes within the large proportion of staff and student responses that mentioned that the role of feedback is to improve learners' work. As shown in Figure 3, the most common responses from both staff and students were that feedback should lead to unspecified improvement or improvement in student work. In both cases, student percentages for both capacities were higher than staff percentages. On the other hand, staff responses were more likely to reference sophisticated pedagogical understandings and language when identifying capacities that feedback should improve. For example, a higher proportion of staff than students reported that feedback should improve students' learning or study strategies, and students' reflexive, self-evaluative and critical thinking.

Overall, while staff and students largely agree that the purpose of feedback should be to improve, staff typically recognise a broader range of areas in which feedback might support students' improvement. This suggests that students have less complex understandings of the purpose of feedback than staff. Additionally, this disparity could hint at mismatches between implicit feedback cues that staff may consider obvious, but which students may fail to recognise and implement. Teaching staff might consider broadening students' feedback literacy by explaining the role of feedback and outlining ways in which it might be used.

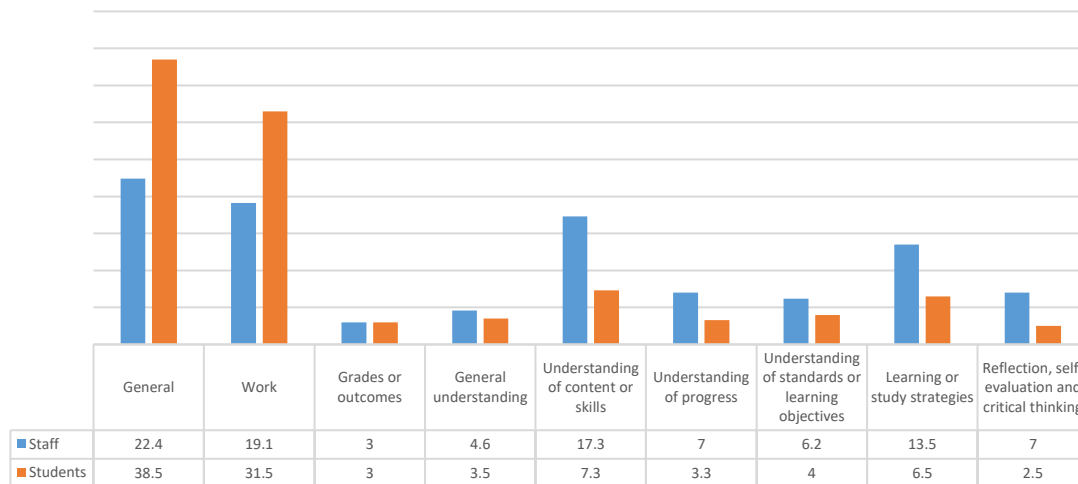


Figure 3. Percentage breakdown of capacities that feedback should improve, as reported by staff and students who identified improvement as a purpose of feedback

Perceptions of effectiveness

Students who had received comments back on at least one assessment task were asked to think of the most recent comments they had received and rate their level of agreement with various statements relating to their effectiveness. The results are presented in Figure 4.

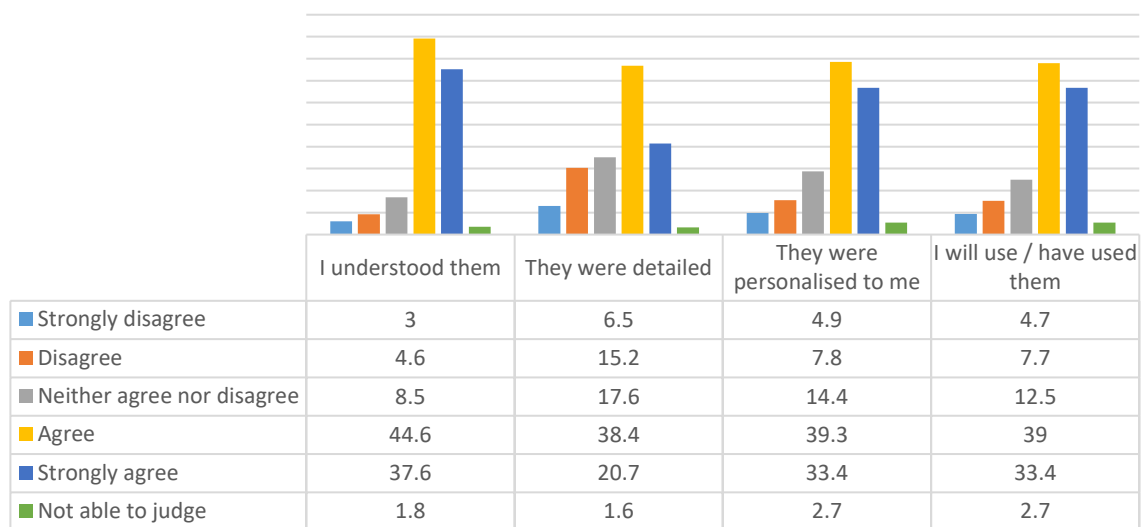


Figure 4. Percentage breakdown of students' level of agreement with various aspects of the feedback comments they received on a recent assessment task

The majority of students (ranging from 59 per cent to 82.2 per cent) agreed or strongly agreed that the feedback comments they received were understandable, detailed and personalised. It is particularly worrying, however, that 21.7 per cent of students disagreed or strongly disagreed when asked if their feedback was detailed, as feedback should be detailed enough to support students in improving their performance. With regard to usability, most students (72.4 per cent) reported that they will use, or had already used, the feedback comments. However, 12.4 per cent ($n = 683$) disagreed, strongly disagreed or could not judge that they had or would use the comments. This is another concerning result, as students are limited in their ability to improve when they do not use feedback comments.

Students were also asked how often the feedback they received during their studies discouraged them (Figure 5). While the majority (61.1 per cent) said ‘never’ or ‘rarely’, 37.4 per cent stated that it discouraged them ‘frequently’, ‘occasionally’ or ‘always’. The 1692 students who answered this way mainly comprised on-campus (85 per cent), full-time (84 per cent), domestic (66.2 per cent) students, who were completing undergraduate (67.1 per cent) or Masters degrees (23.9 per cent) from the faculties of Business and Law (27.8 per cent), Arts and Education (26.5 per cent) or Health (23.3 per cent).

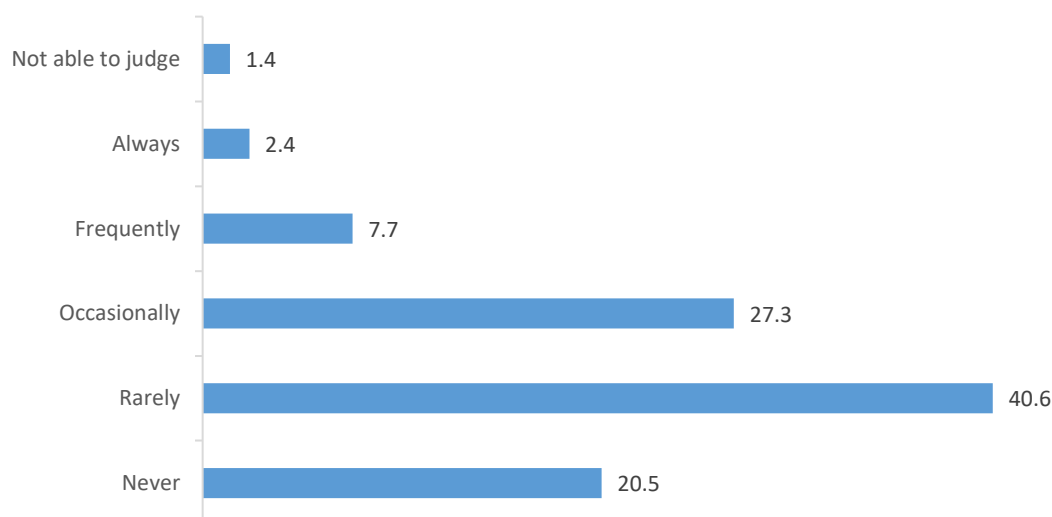


Figure 5. Percentage breakdown of students' opinion regarding how often the feedback they receive in their studies discourages them

These results are troubling, as students who are discouraged by feedback comments may be less likely to use them in order to improve their future performance (Poulos & Mahony, 2008). Academic staff may therefore need to consider how to mitigate negative emotional reactions to feedback comments, and maximise usefulness for students. One way to increase the usefulness of feedback is to ensure that the comments are performance-focused, and are able to be used on a connected task.

Diversity of assessment and feedback types

To gauge the diversity of assessment types, staff with assessment responsibilities (i.e. those who were involved with teaching or marking assessment tasks at the time of the survey) were asked what type of assessment tasks were used in their units at the mid-point and at the end of the teaching period (Figure 6). Staff with assessment responsibilities were also asked what types of performance-related information they provided to students after submission on various types of assessment tasks (Figure 7).

Taken together, these results highlight that students received a variety of assessment forms during and at the end of the teaching period, and there was an increase in the use of exams at the end of semester. While the latter is an unsurprising practice in higher education, the data indicates that it is less common for students to receive feedback comments on exams. This presents a problem, because if academic staff are not providing comments at this point

in the teaching period, students are missing valuable opportunities for improvement. This challenge was noted by many students in the survey, as the following quote reveals:

They didn't give [me] any feedback for the exam, you just get a grade. Which I partially agree and disagree with that – I mean I think it's fair because like there's 1500 or something students doing this, they can't individually give feedback for all of them, [but] you want to know what you did right and what you did wrong.

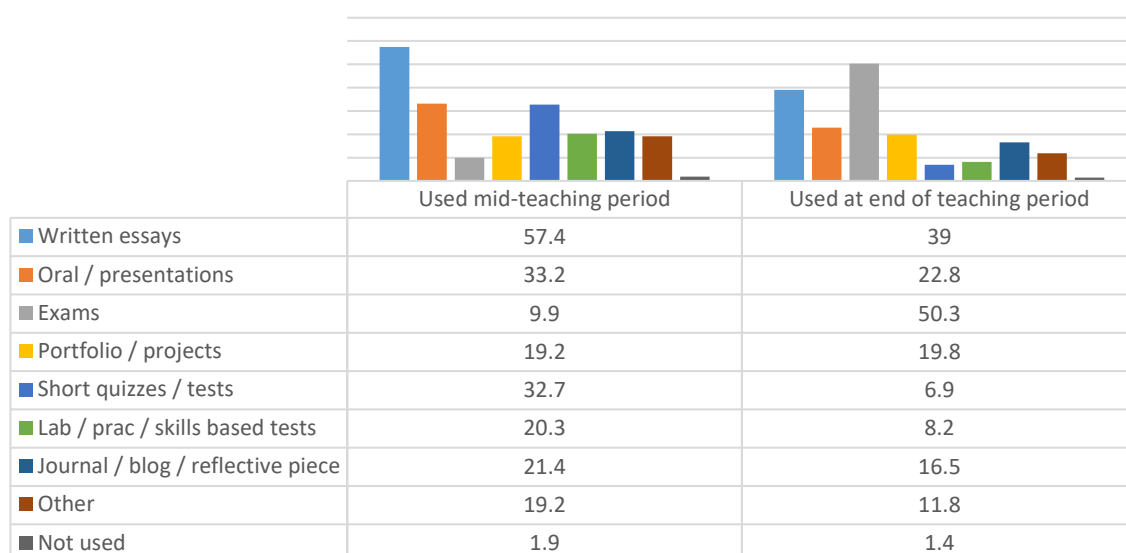


Figure 6. Percentage breakdown of types of assessment tasks used at the middle and end of the teaching period, according to staff with assessment responsibilities

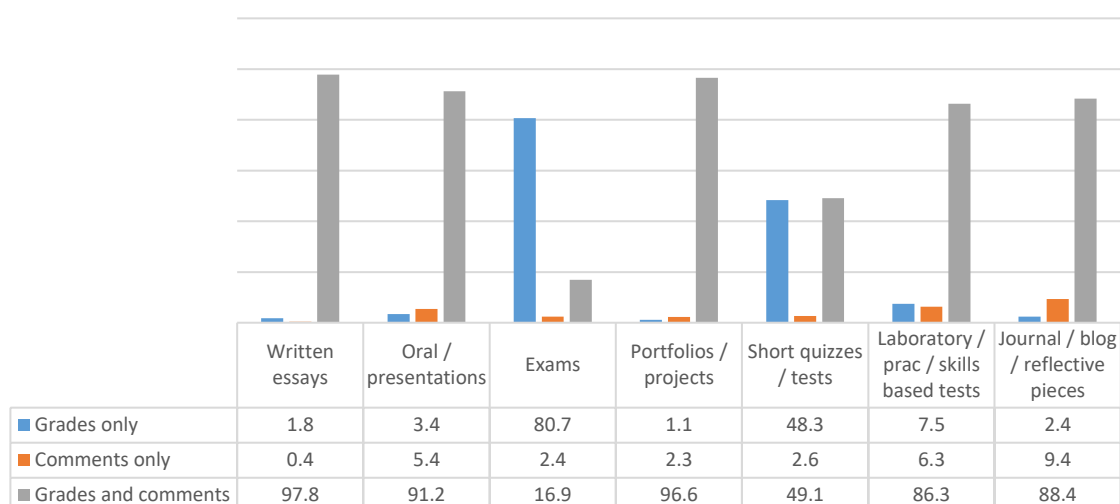


Figure 7. Percentage breakdown of types of performance information provided to students on various assessment tasks, according to staff with assessment responsibilities

A lack of feedback comments at the end of the teaching period is a symptom of the modularisation of units (Deepwell & Benfield, 2012), which is a significant problem within the higher education sector. Such practices make it difficult for students to improve in future assessments, particularly across their programs of study (Timmerman & Dijkstra, 2017; van der Vleuten et al., 2012).

Sources of feedback

Students were asked to indicate who had provided them with feedback comments before and after submission of their assessment tasks. As shown in Figure 8, the most common sources for comments, both before and after submission, were university academic staff, friends, peers and family members. It is interesting to note that, before submission, similar proportions of students engaged in feedback conversations with academic staff, friends, family and peers.

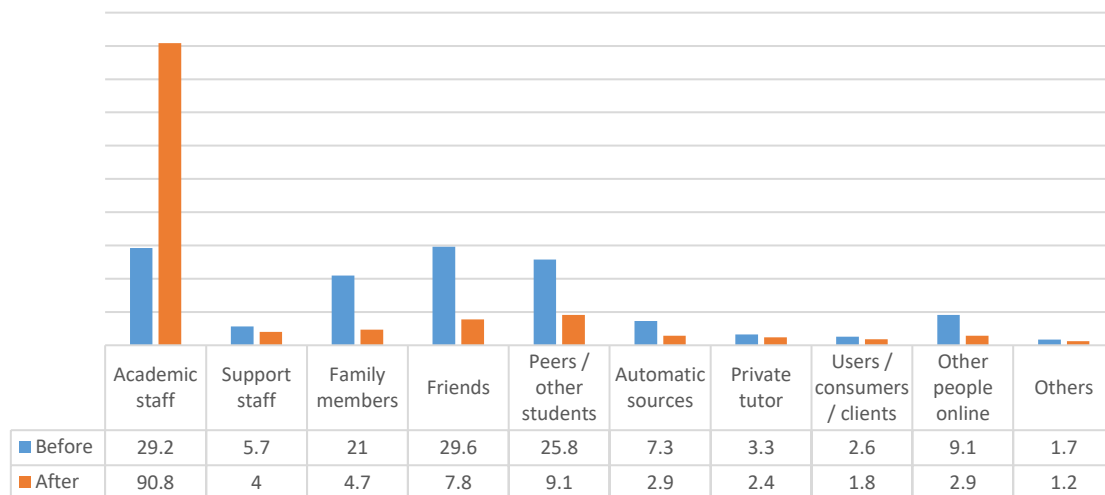


Figure 8. Percentage breakdown of sources of feedback comments before and after submission of assessment tasks, as reported by students

The data shown in Figure 8 were aggregated to explore the proportion of students receiving comments from both official (i.e. academic staff, support staff) and unofficial (i.e. family, friends, peers, automatic sources, tutor, users/consumers/clients, other people online or others) feedback sources. Before submission, 31.8 per cent of students received comments from at least one official source, and 55.2 per cent received comments from at least one unofficial source. After submission, 91.8 per cent of students reported received comments from an official source, and 18.4 per cent received comments from an unofficial source.

Overall, these data suggest that students desire feedback opportunities before they submit tasks, but the majority do not receive comments from formal sources. To enhance the usefulness of feedback, comments should arguably be received from academic staff prior to the completion of a task, and taken on board to improve performance. Academic staff may need to find ways to elicit student performance earlier, to facilitate effective feedback processes. In fact, if students are not encouraged and supported to seek feedback from educators, they may find it too difficult to take the initiative. This was evidenced in the following focus groups comments made by undergraduate students:

[To seek feedback from an educator] I'd have to walk a long way to the other end [of campus] and I didn't think it was worth the effort because I could just find some help online and ask friends.

You have to have that confidence to go up at the end of a class and maybe some people are still hanging around, and ask questions.

Another issue is the usefulness of comments provided by academic staff prior to submission. Over 50 per cent of students found the comments they received from academic staff prior to submission to be 'extremely' or 'very' helpful. However, 46.6 per cent of students reported finding the comments to be 'moderately helpful', 'slightly helpful', or 'not at all helpful'.

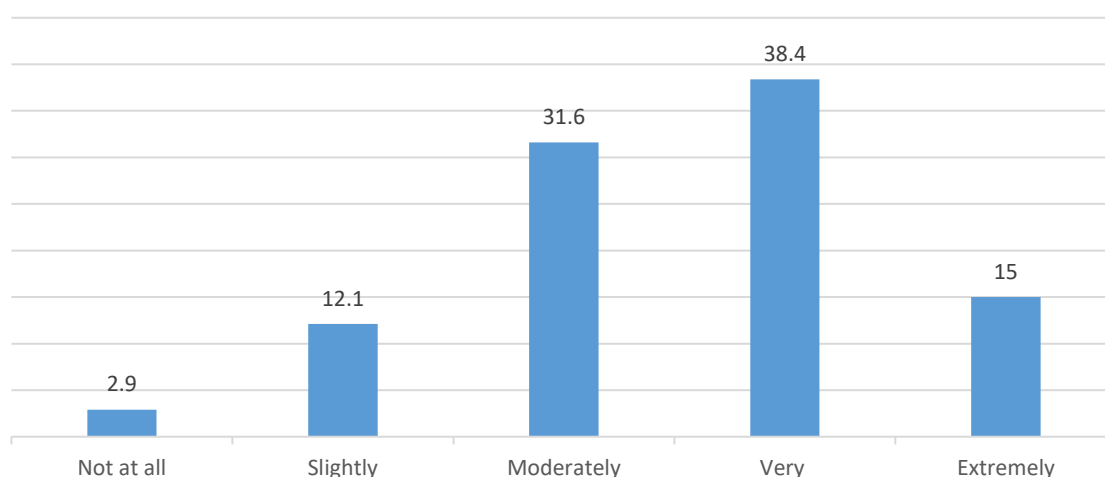


Figure 9. Percentage breakdown of students' ratings of the usefulness of feedback provided by university academic staff before submission of an assessment task.

One student spoke about this issue in the focus group:

I have only ever really had the opportunity to ask about an essay plan for history. When I asked she said she had no knowledge on the area, so it wasn't really here nor there.

These results are particularly worrying, as feedback practices are seen to be a major investment for staff and institutions, and the very purpose of feedback is to help students improve their performance. If academic staff are inaccessible, or if the comments provided are not helpful enough, students may seek feedback through peers, family and friends. However, these informal feedback sources may provide comments that are of limited use:

I spoke to one of the consultants that I work with ... he changed the [assessment task] substantially, and I had to change a lot of it back, because he wasn't aware of the criteria that had to be included ... also, he included stuff that was not my original work, which I couldn't submit for an assessment, so I had to take that out.

Institutions may therefore need to consider the impact that such feedback may have on student learning outcomes, and whether they have a responsibility to support students in leveraging useful feedback from these sources.

2.2. Phase 2: Case studies of when feedback works, and why

From the rich data sets developed from phase 1, seven diverse examples of ‘promising’ or ‘best’ practice were identified from different subjects and courses across the two universities, and examined in detail. These included cases that were clearly reported as having an impact on student learning outcomes and student experience. Each case was based around the following sources of evidence: examination of the pedagogic/instructional design elements of the feedback practices, interviews with students relating to the process and impact of the feedback, and in-depth interviews with academic staff relating to the course or program design and implementation. In addition, drawing on the ecological approach, the interviews were used to explore the specific ‘conditions for success’, including personal skills and dispositions, campus-based infrastructure, subject discipline, cohort variations, other institutional factors (e.g. leadership, resourcing), histories of feedback practices and culture of assessment.

The full [case studies](#), along with rich video interviews with educators and members of the research team, can be found on the project website. The titles of the cases are:

- Case 1 – Developmental and diverse feedback: Helping first-year learners to transition into higher education
- Case 2 – Personalised feedback at scale: Moderating audio feedback in first-year psychology
- Case 3 – In-class feedback: A flipped teaching model in first-year physics
- Case 4 – Authentic feedback through social media: Feedback beyond the learning management system in second-year digital media
- Case 5 – Layers and loops: Scaffolding feedback opportunities in first-year biology
- Case 6 – Multiple prompt strategies across contexts: Feedback in classroom, lab and professional practice
- Case 7 – Investing in educators: Enhancing feedback practices through the development of strong tutoring teams

Each case study includes three main sections:

- Overview: Description and context of the case.
- Why it worked: Elements of design, enablers, challenges, and references to what the research literature says about the key practices involved.
- Moving forward: Advice for educators, institutions, schools and faculties.

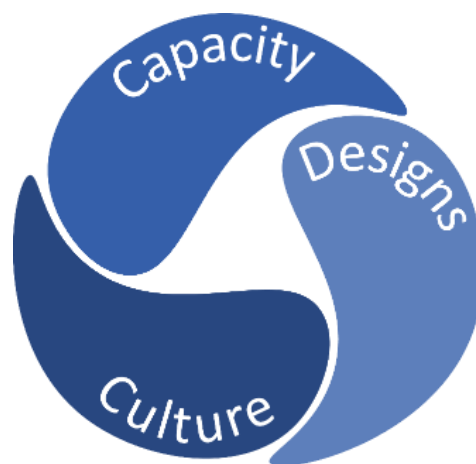
The case studies revealed several important insights about effective feedback design. For example, effective practices do not just occur. They evolve over time and numerous iterations. In addition, several of the cases highlight that rich and personalised feedback can occur at scale, across disciplines. Furthermore, feedback is most effective when educators explicitly bring learners into the process, such as by helping them to understand the purpose and design of feedback.

2.3. Phase 3: Framework for effective feedback

The third phase of this project involved development of a framework to support effective choices surrounding feedback design. The academic literature, data collected in phases 1 and 2, and input from the reference group confirmed that the sector needed a better understanding of the underlying conditions that support the evolution of effective feedback practices. The resulting framework is heavily grounded in empirical evidence, and framed by an ecological perspective, to highlight underlying conditions for success and potential barriers. The literature, and the project team's own extensive research, clearly indicates that one successful feedback strategy cannot simply be parachuted into another class or context with the same results. However, the framework sheds light on this issue and offers many strategies for moving forward.

The framework comprises:

- **a definition** of effective feedback
 - **7 design challenges** arising from the definition
- **12 conditions** for effective feedback, clustered according to themes of capacity, designs, and culture
 - **40 strategies** drawn from the case studies that illustrate how the conditions were met in those cases.



A brief version of the framework is presented below (the full [framework](#) is available at the project website).

Figure 10. Conditions for success categories: capacity, designs and culture

Definition

There is no universally accepted definition of feedback. The project team quickly identified a need in the higher education sector for a definition that was usable, succinct, identified the key variables, and provided a clear purpose. This definition is viewed as a significant project output in its own right.

The definition:

Feedback is a process in which learners make sense of information about their performance and use it to enhance the quality of their work or learning strategies.

This definition builds on – and is heavily influenced by – the work of Boud and Molloy (2013) and Carless (2015). The definition arises from the project team and project evaluator working together to consider previous conceptions in light of the team's growing

understanding of the key issues arising from phase 1 and 2: from micro-classroom-level conceptions of feedback to macro-level strategic policy.

Rather than focusing on a single step of providing comments, this definition includes the entire feedback loop – from initial performance through to the consequences of the feedback input. Feedback is a cyclical process, in which students obtain valuable information about how they can improve their future performance and learning strategies and then use that information to change subsequent activities or behaviours. The ‘feedback loop’ is only completed once the student has enacted the performance information; that is, once they have taken the key messages on board and used them to somehow enhance a subsequent performance on a related task (for more details see Boud, 2015). The definition is learner-centred and recognises that, ultimately, it is the learner who needs to be able to make sense of the information and operationalise it. This definition also purposefully adopts an inherently positive stance regarding feedback; that is, that it will ‘enhance the quality of their work or learning strategies’. The team recognise that the feedback process could result in poorer performance, especially where learners incorrectly make sense of information about their performance. Nevertheless, a positive stance was adopted to reinforce that, in this higher education context, the purpose of assessment feedback is to improve outcomes.

Challenges

The definition is aspirational and inherently contains a number of complex challenges that need to be addressed in any design for feedback. These challenges are briefly listed here, and are included in full in on the project [website](#).

- Process: There is no universal approach for feedback that works in all contexts, and the process may, ideally, be different for each individual. How do educators decide on the best process for the context and individual, and how do they recognise it is working?
- Learners: Learners are central to any feedback process, which may not even involve educators at all. How do educators support learners in seeking, generating and using performance information?
- Sense-making: What skills do learners need to make sense of the information about their performance?
- Information: What sort of information is most useful for learners?
- Performance: Is a single performance sufficient? Should feedback focus on the entire performance, or only components?
- Effect/impact: How do educators or students know if feedback has an effect?
- Quality: Feedback information needs to be targeted towards improvement, but against what benchmark?

Conditions for success

The project findings indicated that successful feedback practices were influenced by the feedback design, people, institution and culture involved. To engender effective feedback one needs to consider more than simply the feedback strategy or content. Accordingly, the

project identified a number of what have been called ‘conditions for success’, which are thematically organised into three categories: capacity, designs and culture.

Feedback is successful when...

Capacity for feedback

1. Learners and educators understand and value feedback
2. Learners are active in the feedback process
3. Educators seek and use evidence to plan and judge effectiveness
4. Learners and educators have access to appropriate space and technology

Designs for feedback

5. Information provided is usable and learners know how to use it
6. It is tailored to meet the different needs of learners
7. A variety of sources and modes are used as appropriate
8. Learning outcomes of multiple tasks are aligned

Culture for feedback

9. It is a valued and visible enterprise at all levels
10. There are processes in place to ensure consistency and quality
11. Leaders and educators ensure continuity of vision and commitment
12. Educators have flexibility to deploy resources to best effect

Figure 11. Conditions for effective feedback

This is not to suggest that these are the only conditions, nor that all 12 conditions need to be simultaneously present to ensure success. Nevertheless, in the seven rich [case studies](#), one or more of these conditions were observed as being a significant factor in the feedback success. Consequently, it is proposed that the success of assessment feedback may be facilitated by considering the 12 conditions in Figure 11.

The project [website](#) contains the full descriptions of the 12 conditions, as well as 40 strategies drawn from the case studies that illustrate how the conditions were met in those cases. The entire framework is also featured on the project website, and includes videos with the project team highlighting how educators and institutions can enhance feedback [capacity](#), [designs](#), and [culture](#).

2.4. Phase 4: Working with institutions

In this phase, the project team disseminated the project findings and explored the feasibility of the framework for effective feedback. This occurred across four stages. First, a national roadshow of feedback workshops (stage 4a) and roundtables (stage 4b) were held in six universities across Australia. These were attended by 295 academic staff and 66 senior leaders. These consultations informed the refinement of the framework, and provided useful ideas for how the conditions for success could be addressed by institutions.

Second, an online webinar was held (stage 4c) in order to extend the availability of the project’s findings, resources and framework to academic staff unable to attend a national roadshow event. This was attended live by 131 academic staff, and the recording has been viewed over 200 times since late November 2017.

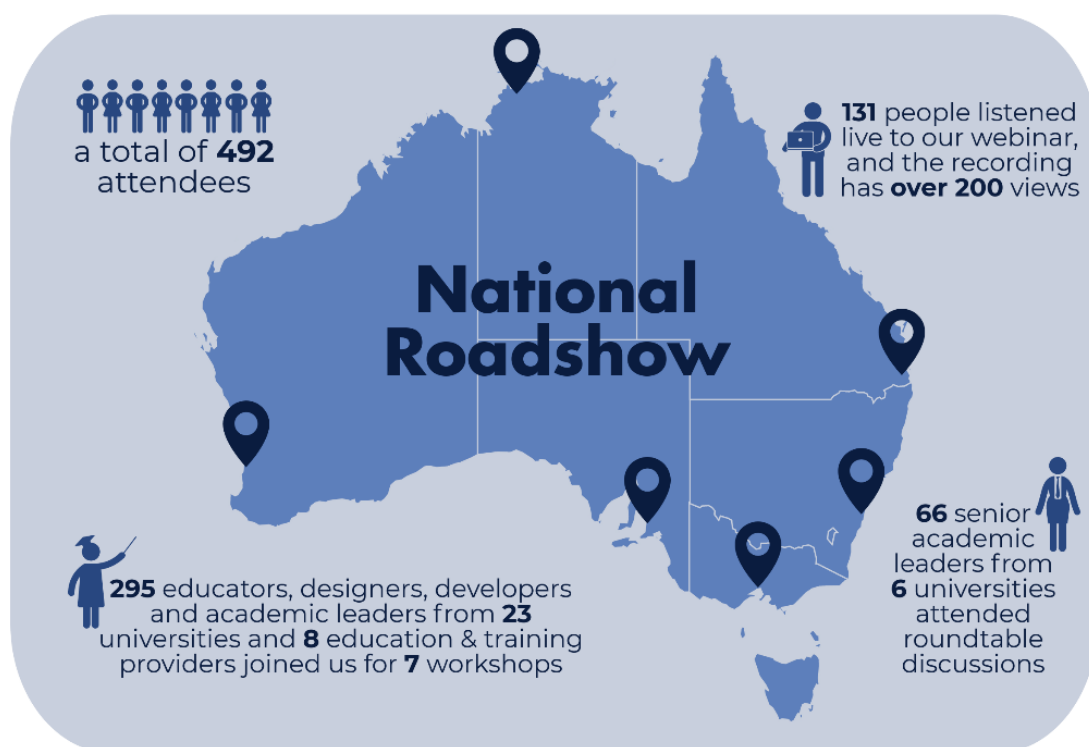


Figure 12. National roadshow engagement and impact

Third, a survey was designed to collect feedback about the dissemination sessions and the conditions for success outlined in the framework (stage 4d). The survey targeted all registrants and attendees from the feedback sessions held in stages 4a–4c, as well as senior leaders from all Australian universities (Pro-Vice Chancellors, Deputy Pro-Vice Chancellors, Executive Deans, Provosts, Deans/Associate Deans, Directors of Learning Centres, Heads of Schools, etc.).

The survey was completed by 250 respondents. This included senior leaders (31.2 per cent), academic staff (53.6 per cent) and professional staff (15.2 per cent). Overall, survey responses were obtained from staff working at 95 per cent (39 of 41) of Australian universities. With regard to senior leaders, responses were obtained from 83 per cent (34 of 41) of Australian universities.

The first series of items focused on impact and key takeaways from the feedback sessions. These items (three closed-ended and four open-ended) were only completed by the 152 respondents who had attended a feedback session: 25.6 per cent attended one of the three-hour feedback workshops, 24 per cent attended the online webinar, 9.2 per cent attended the two-hour Monash workshop and 4 per cent attended a 45-minute roundtable. The results of the three closed-ended feedback session items are displayed in Figure 13. The results indicate that the feedback sessions were extremely well received by attendees, and the information was considered to be useful.

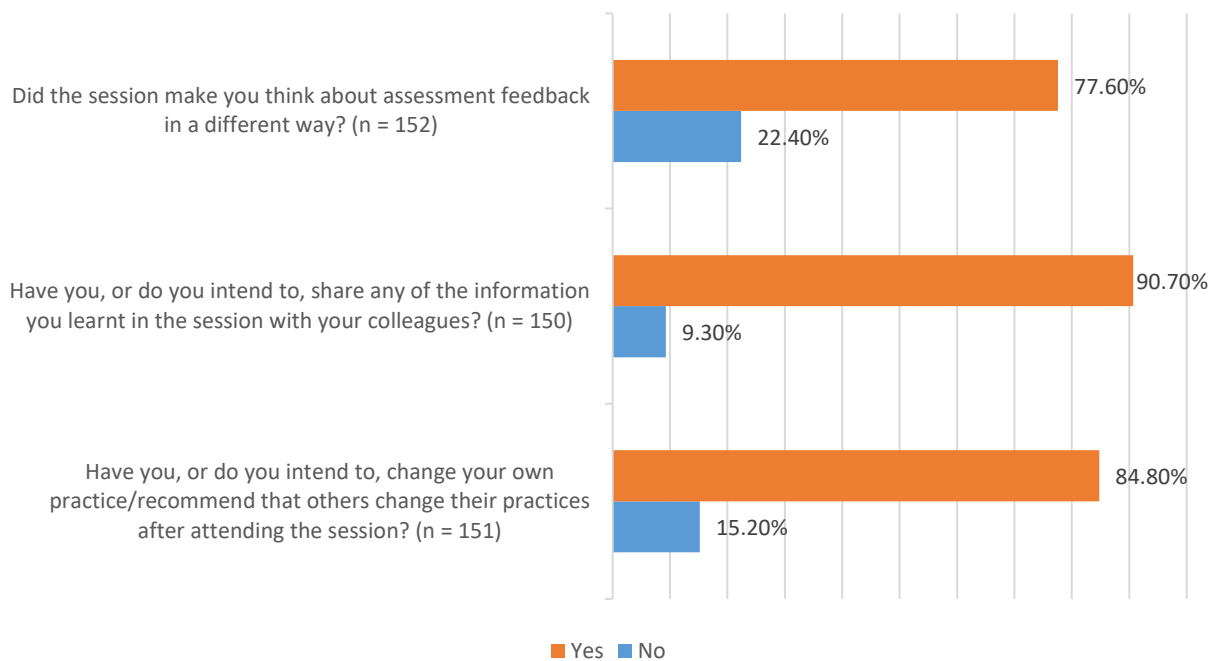


Figure 13. Percentage breakdowns showing impact of feedback session on attendees

The majority of respondents indicated that they now think about feedback differently after attending a session. Examination of these respondents' open responses indicates that the main changes to thinking include consideration of the students' role in feedback, recognising the affective nature of feedback, understanding that effective feedback requires a connected task, and reconceptualising feedback as a process rather than just a comment. For the 22 per cent of respondents who indicated that they had not changed thinking about feedback, the main reason for this was that they already understood and agreed with the key messages that were offered in the sessions.

It is heartening that almost 91 per cent of respondents noted that they intended to share information from the feedback sessions with their colleagues. Of the 9.3 per cent who suggested that they did not intend to share information, the main reasons were that they did not have the time to do so, were not in a position to do so, or because their colleagues attended the sessions with them. A majority of respondents (84 per cent) indicated that they would change their own practice as a result of attending a feedback session. Some mentioned attempting to incorporate different modes of feedback (e.g. video feedback), discussing quality feedback processes with sessional staff, and designing feedback and assessment so that it feeds into a connected task (completing the feedback loop). For those that said they would not change, the main reason was that they felt they were already implementing the concepts discussed in the feedback sessions.

Senior leaders were asked to rate the conditions for success according to level of importance and level of implementation at the institution they currently worked at. The means and standard deviations are presented in Table 3. As the means for importance range from 3.92 to 4.84, it appears that most leaders found the conditions to be 'very important'. In contrast, the means for implementation range from 3.09 to 4.00, which indicates that the

majority of leaders felt they the conditions were implemented in their institutions ‘to some extent’.

Table 3. Means and standard deviations for senior leaders on questions measuring levels of importance and implementation of each condition for success.

Condition for success	Level of importance			Level of implementation		
	<i>n</i>	Mean	SD	<i>n</i>	Mean	SD
Learners and educators understand and value feedback	76	4.84	(0.37)	73	4.00	(0.69)
Learners are active in the feedback process	77	4.60	(0.69)	75	3.17	(0.78)
Educators seek and use evidence to plan and judge effectiveness	77	4.39	(0.67)	74	3.66	(0.91)
Learners and educators have access to appropriate space and technology	77	3.92	(0.94)	75	3.83	(0.96)
Information provided is usable and learners know how to use it	75	4.72	(0.51)	74	3.54	(0.74)
It is tailored to meet the different needs of learners	76	4.24	(0.83)	75	3.09	(0.81)
A variety of sources and modes are used as appropriate	76	4.01	(0.89)	74	3.58	(0.95)
Learning outcomes of multiple tasks are aligned	74	4.38	(0.85)	74	3.49	(0.93)
It is a valued and visible enterprise at all levels	76	4.39	(0.77)	75	3.52	(0.89)
There are processes in place to ensure consistency and quality	77	4.65	(0.64)	75	3.61	(1.05)
Leaders and educators ensure continuity of vision and commitment	76	4.37	(0.80)	74	3.58	(0.83)
Educators have flexibility to deploy resources to best effect	77	4.26	(0.75)	75	3.57	(0.87)

Note: Response options for level of importance ranged from 1 = not at all important to 5 = extremely important. Response options for level of implementation ranged from 1 = not at all to 5 = to a large extent.

SD, standard deviation.

Analysis of open responses for the item asking about the most challenging condition revealed that senior leaders most often cited condition 2 (‘learners are active in the feedback process’) as the most challenging condition, followed by condition 1 (‘learners and educators understand and value feedback’) and condition 6 (‘it is tailored to meet the different needs of learners’). The most common reasons for these conditions being selected centred on staff and student attitudes. For instance, of those who selected condition 2, they suggested that many educators will find it difficult to accept students as active participants in the learning process, or that students are primarily interested in how feedback justifies a mark or are only interested in the mark.

Other challenges to implementing a condition (or conditions) with a strong minority included workload difficulties (including around sessional staff and policy restrictions), large and diverse student cohorts, and problems with approaches and systems at faculty or institutional levels (including coordinating programmatic assessment).

3. Impact: dissemination and engagement

This project was driven by a desire to impact on the higher education sector as a whole, and the team have generated considerable levels of dissemination of outputs and findings through print media, social media, websites, direct email, peer-reviewed journal articles, conference presentations, book chapters, webinars, masterclasses, workshops, roundtables, keynote presentations, and seminars. At the completion of the project, impact has been demonstrated through changed practice of team members, and greater understanding of feedback by students, educators, and senior leaders, both at participating institutions and more broadly (see Appendix E).

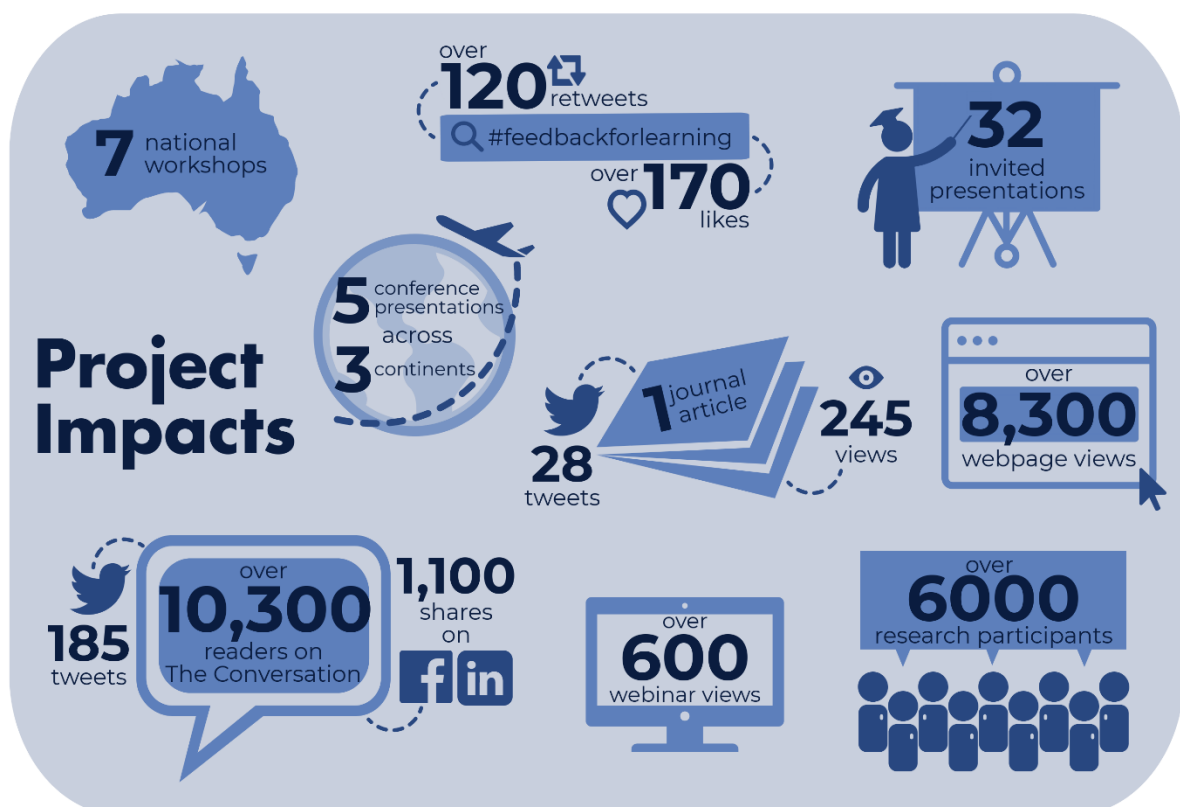


Figure 14. Project impact

The research phases of this project were extensive: almost 6000 students, educators, academic developers and senior leaders were directly impacted through participation. As the project resulted in extremely rich data sets, dissemination work will continue into 2018 and beyond. The project website will be updated to reflect this ongoing work, and will host the project deliverables until at least 2023. A summary of dissemination and engagement activities is presented below (full details in Appendix D).

The project has achieved or surpassed its goals in terms of deliverables. This includes the project website, which hosts the framework, case studies, videos and professional learning resources including workshop materials and webinar recording. The website also hosts the infographics, initial data release, survey instrument and (once approved) this final report.

Finally, the website also lists the presentations and publications arising from or drawing on the findings of this project (listed in full in Appendix D).

Project findings have also been disseminated through 32 local, national and international keynote presentations, masterclasses, workshops and seminars. Team member Phillip Dawson presented a webinar hosted by Turnitin that was attended by over 220 people and viewed by a further 418 people. The project team members are committed to continuing this dissemination and engagement work, including future workshops, presentations and scholarly publications. The website will be updated with these activities as they occur. To date, the website has logged more than 8300 page visits in three months.

In addition to website views, the project has involved a considerable number of students, educators and leaders across Australian universities, either as participants in data gathering or in dissemination events. Regardless of the purpose of their engagement, they have all been exposed to critical thinking relating to the purpose and effectiveness of feedback.

- 4920 respondents for the large-scale survey
- 43 focus group participants
- 34 case study interviewees
- 295 workshop participants
- 66 senior leaders attending roundtables
- 131 attendees at the online webinar, and a further 236 views of the recording
- 250 respondents for the post-workshop survey.

In addition to project participation, the project findings have been featured in an article published in *The Conversation*. The article was accessed by 10,334 readers, tweeted 185 times, and shared 1110 times via Facebook and LinkedIn in two months. Project findings have also been discussed on social media, including over 100+ tweets using the project hashtag #feedbackforlearning. There were also 20+ project-related tweets from the project team, which attracted over 120 retweets and over 170 'likes'.

In terms of scholarly publications, the project team has produced four peer-reviewed journal articles (one published, one accepted and two under review), two book chapters (in press) and eight conference presentations (five completed, one accepted and two submitted). An advance online publication version of the journal article by Ryan and Henderson (2017) has been viewed 245 times since December 2017, and received 28 tweets (by users with an upper bound of 17,223 followers). In addition, the team is currently in the midst of, and plan to continue, writing up several journal articles led by various team members. These will be submitted over the coming 12 months, and links to the subsequent published papers will be added to the resources section of the website. The project team are organising an international research symposium, to be held in September 2018. This symposium focuses on one of the key findings from this project – that feedback should be conceived of as a process that leads to impact. An edited book is a planned outcome of the symposium.

4. Conclusions

This project set out to better inform the higher education sector on how feedback can improve learning. The findings highlight that there is a great deal of interest across the sector for improved assessment feedback. There is also great diversity in quality and understandings of the feedback process. In brief, students want more effective feedback, but are not necessarily equipped to best seek, understand and utilise it. On the other hand, staff generally recognise the importance of feedback, but can be limited by their beliefs and understandings of feedback, along with the resources available to them. Nevertheless, there were many instances where feedback was reported to be successful by both students and staff.

The phase 1 survey data indicated that poor feedback practices still exist throughout the Australian higher education sector. Even though the large-scale survey revealed a generally positive set of medians, there were still very low and very high scores within these datasets, along with middling results. In addition, it appears that cultures and attitudes to feedback at departmental, faculty and institutional levels continue to vary, and are often misunderstood or considered too difficult to attempt to change. On the other hand, students reported many instances of effective feedback practices. It was also noted that, despite beliefs commonly held by staff, students wanted more feedback and recognised that it was important for their improvement. Nevertheless, it was also apparent that both staff and students largely saw feedback as being instructor-centred – that is, something that is given – rather than a student-centred process in which they access and make sense of information from multiple sources before acting on it.

This project has also highlighted, through the seven rich case studies, how each successful feedback design is unique and has evolved over time, requiring constant improvement and adaption for each new cohort and iteration of the subject. Some common factors across these instances of effective feedback practice include:

- assessment tasks and related feedback moments spread across a unit, with feedback clearly aligned in relation to subsequent tasks, or even programmatic approaches to feedback across multiple units. However, programmatic design requires an initial investment of time and cross-unit co-ordination, and can be met with a level of resistance or perceived as too difficult to implement
- personalised feedback that builds relationships between educators and students, including at scale, and supports the growth of individual students from where they were to where they need to be with regards to learning outcomes
- support and development of educators to improve feedback practices, including the moderation of feedback
- diverse assessment tasks and feedback types
- consistent leadership at an educator-in-charge level, and a commitment to ongoing self-scrutiny and development

- creative and flexible approaches to feedback and marking workloads, mandated assessment allocations and feedback platforms
- developing students' feedback literacy, a significant focus when it comes to ensuring students experience effective feedback – that is, developing student understandings of course requirements and how they can make best use of feedback.

Feedback is a complex process, and its success is as much about the context and individuals involved as it is about pedagogy. As a result, this project has developed a framework that defines feedback and highlights its design challenges, as well as proposing 12 conditions for success and 40 strategies grounded in the case studies. This framework has been workshopped with 361 university leaders, lecturers, academic developers and instructional designers who have confirmed that it is a needed and useful resource. The 12 conditions for feedback success outlined in the framework, under three categories – capacity for feedback, designs for feedback and culture for feedback – have been developed from the findings from all phases of the project, and collate 12 factors that contribute to effective feedback practices.

As the extensive engagement with the national roadshow, webinar and online resources shows, there is significant interest in professional development around feedback – institutions and faculties should aim to capitalise on this interest to lay the foundations for lasting change. There has also been significant engagement with, and interest from, senior academic leadership at a faculty and institutional level, indicating that the higher educator sector is ready and willing to engage in meaningful improvements to feedback practices.

This project has revealed considerable areas for future strategic investigation and investment from both institutions and government. The most significant is the need for a better understanding of, and strategies for, the designs of coherent and measurable programmatic designs – that is, the explicit linking of feedback loops to subsequent assessments within and across subjects.

In conclusion, while there are signs of improved feedback practices, there continues to be room for improvement. With this in mind, this project has provided a framework for effective feedback, including considerations for how such practices can be made more widespread. At the risk of oversimplifying the matter, this project has highlighted a need to shift away from seeing feedback as 'hopefully useful' and requiring no follow-through on the part of educators to seeing feedback as a process in which students should be active and engaged, and which should have an effect that leads to improvement.

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Appendix A: Certification

Certification by Deputy Vice-Chancellor (or equivalent)

I certify that all parts of the final report for this OLT grant provide an accurate representation of the implementation, impact and findings of the project, and that the report is of publishable quality.



Name: Professor Susan Elliott,

Position title: Deputy Vice-Chancellor and Vice-President (Education)

Monash University

Date: 1 March 2018

Appendix B: Evaluator's report

Introduction

The importance of useful feedback for advancing student learning is well-established but feedback processes are difficult to carry out effectively in mass higher education. Indeed, there is plenty of evidence of student dissatisfaction with feedback and much well-intentioned feedback fails to achieve its objectives. In mass higher education with assignments often clustered at ends of stand-alone units, it is difficult to promote student action on feedback so that feedback loops are closed. When feedback information provided by teachers is not used by learners, there is much wasted effort and ongoing frustration for teachers and learners.

Project Evaluation

Against this backdrop the project Feedback for learning: Closing the Assessment loop is a particularly timely initiative. The main thrust of the project is to improve the student learning experience through enhancing institutional, teacher and student capacities to leverage assessment feedback. One of the main intended project outcomes is to develop an empirically-based framework of effective feedback to guide institutional policy, academic developers, instructional designers and teachers.

First, I would like to say that the project has made a very positive impression on me. At the outset, I was impressed by the persuasive project proposal that was both ambitious and achievable, and promised the development of an attractive framework for effective feedback. Associate Professor Michael Henderson has led the project ably and has been well-supported by an impressive and well-rounded team, comprising a talented group with complementary expertise and experience. Sometimes once funding is secured, a project veers in different directions but in this case I am pleased to note that the project has followed its blueprint closely and successfully.

As project evaluator, I have been involved in both formative and summative capacities. I have been able to follow and comment on progress along the way in relation to minutes of meetings and progress reports. Most significantly, I was able to join a 3-day intensive series of team meetings (April 3-5, 2017) at the Melbourne city centre CRADLE offices. During these meetings, we brainstormed definitions of feedback; examined case study evidence from the project; and developed ideas for the framework of effective feedback practice. These discussions were productive and stimulating in informing both the work of the project team, and my own ongoing feedback research. An interesting and positive element of the 3 day event was the involvement of a cartoonist to add visual stimuli to our deliberations: his contributions have been skilfully used by the team.

I have also taken the opportunity to involve myself in other activities of the project. I listened to Phillip Dawson's project webinar; and conference presentations at the Assessment in Higher Education project in Manchester (June, 2017) by Michael Henderson, and by David

Boud. I have also provided comments on an earlier draft of the framework for effective feedback practice.

Overall, I am very impressed by the project, its outputs and its dissemination activities. The Final Report details a number of significant achievements. The team has been successful in collecting an impressive array of evidence: questionnaire responses from around 4,500 students and more than 400 staff; and rich case studies of different feedback designs. The work has been successfully disseminated through a national roadshow involving nearly 300 academics; leadership roundtables at 6 universities; and through widespread international conference dissemination.

One of the impressive outputs of the project is the Feedback for learning website (www.feedbackforlearning.org). It contains a wealth of freely accessible material and has provided a solid identity for the project. Housing this website within the Monash new media site is a convenient way of maintaining it as a medium-term repository. The team has also made very good use of social media using #feedbackforlearning. The article in The Conversation also made a powerful impact with wide readership and generation of publicity for the project. In these ways, project impact has been promoted in a variety of ways, catering for different audiences.

As I suggested earlier in the report, the framework for effective feedback is both a cornerstone of the project and one of its attractive angles.

Feedback is successful when...

Capacity for feedback

1. Learners and educators understand and value feedback
2. Learners are active in the feedback process
3. Educators seek and use evidence to plan and judge effectiveness
4. Learners and educators have access to appropriate space and technology

Designs for feedback

5. Information provided is usable and learners know how to use it
6. It is tailored to meet the different needs of learners
7. A variety of sources and modes are used as appropriate
8. Learning outcomes of multiple tasks are aligned

Culture for feedback

9. It is a valued and visible enterprise at all levels
10. There are processes in place to ensure consistency and quality
11. Leaders and educators ensure continuity of vision and commitment
12. Educators have flexibility to deploy resources to best effect

This is a very useful framework and I wish the team all the best in getting it published in a high-impact journal. A reviewer may want the team to show the links explicitly between the 12 conditions for success and the case studies. What are the implications if some of the 12 features relate more convincingly to the cases than others?

The thematic organization into three categories: capacity, designs, and culture, is a useful way of framing feedback. Indeed, the project has rightly focused on capacities and designs: both

key features for developing effective feedback processes. The 12 conditions are both intuitively reasonable and seem to relate well to the rich case study material which the team have accumulated.

Perhaps the category of 'Culture for feedback' is the least well-developed: points 9-12 read as quite general and might be sharpened to get to the heart of institutional cultures for effective feedback processes. Institutional cultures to support effective feedback seems to be a particularly interesting topic that has been little dealt with in the existing literature. Do institutions have a vision for feedback, and does that need to be established before we can talk about continuity of vision? An institutional culture in which all staff from senior management downwards are seen to welcome 360 degree feedback and act on it might be an important dimension. To what extent is good feedback practice encouraged and rewarded institutionally? An interesting recent mini-trend relates to best Feedback Awards in addition to the more conventional Outstanding Teaching Awards.

It might be worth finessing the stem to read something like: **Feedback has most potential for success when one or more of the following conditions are salient.** As currently phrased, there is a danger that the superficial reader might misunderstand that all the features need to be present, and as the Final Report acknowledges, this is not the intention of the team. I see a journal article elaborating the framework for effective feedback to be a key output and priority area. Indeed, in recent months the team has been working hard on consolidating their key journal article outputs, and I encourage them in these endeavours. An article by Henderson and Ryan has recently appeared in the flagship journal, *Assessment and Evaluation in Higher Education*. As the final report indicates, there are more journal outputs on the way.

It has also been positive to see the team thinking about project legacies. One of the positive ways in which they are seeding a legacy for the project is through an international symposium to be held in Prato, Italy in early September 2018. The focus is on the impact of feedback, and the closing of feedback loops. An edited collection is envisaged building on and further extending the good work of the project. This edited book and the journal articles emanating from the project will form part of the project legacy.

The team may also wish to continue their ongoing thinking about the longer-term impact of the project on practice at Monash, Deakin, and University of Melbourne. It may be useful to seed some follow-up projects using internal resources and grants. Some kind of community of practice might be developed to build on some of the impetus that has been generated. This does not need to involve heavy involvement of the project team members but they may like to be involved in setting it up.

All good projects lead to follow-up possibilities. A useful insight in the Final Report is for continued work in developing better understanding of, and strategies for, the designs of coherent and measurable programmatic designs – that is, the explicit linking of feedback loops to subsequent assessments within and across subjects. Program-based feedback seems to be an important topic inviting further exploration.

Conclusion

To sum up, I endorse the project report enthusiastically. The intended outcomes have been well-achieved, and the impact of the project is first-rate. The project outcomes are excellent and the project as a whole represents very good value for money. The dissemination and visibility of the project is impressive, and its local and international impact is considerable. It is a terrific team effort in which all members acquitted themselves admirably. It has been a great pleasure to be associated with the project as External Evaluator.

Professor David Carless
Faculty of Education
University of Hong Kong
February 27, 2018

Appendix C: Updated impact plan

Anticipated changes (projected Impact) at:				
	Project completion	Six months post-completion	Twelve months post-completion	Twenty-four months post-completion
1. Team members	<ul style="list-style-type: none"> The feedback expertise of the team has increased as a result of this project. This is demonstrated by the 32 invited presentations and planned future presentations. The feedback practices of the two team members who are actively teaching have evolved. They now have more complex conceptions of feedback, and adapt this knowledge into practice (for example, by actively trying to develop evaluative judgement, using exemplars, providing greater support to sessional staff, etc.). Some of this work has resulted in a book chapter (Henderson, Phillips & Ryan, in press). 			
2. Immediate students	<ul style="list-style-type: none"> The enhanced feedback practices of the two team members who actively teach has had a positive impact on students' work. A student survey provides evidence of this, as students noted: 'the feedback was very useful for improving on the second assignment', and 'the feedback provided me with areas where I could develop further which I tried to hone for Assessment Task 2'. 	<ul style="list-style-type: none"> It is expected that information relating to enhanced feedback designs disseminated through project workshops (i.e. the case studies and framework) will enhance educators' feedback practices and lead to improved student learning and satisfaction. This notion is supported by the findings of the Phase 4 survey, as the majority of respondents indicated that they would change their practice. Similarly, this project has demonstrated that students need to be brought into the feedback process and provided with more orientation to feedback practices. This may also improve student capacity for seeking and acting on feedback. 		
3. Spreading the word (Contributions to knowledge in the field)	<ul style="list-style-type: none"> Dissemination of outputs, including infographics, videos, and professional learning resources via social media, direct email, media coverage, etc. 1 journal paper published, 1 accepted, and 2 under review – peer recognition of validity of findings. 5 conference presentations – to expand influence. 	<ul style="list-style-type: none"> At least 2 more journal articles published – to demonstrate peer recognition of validity of findings. At least 1 more international conference presentation. An international symposium on feedback: leading 	<ul style="list-style-type: none"> Additional journal and conference papers arising from ongoing data analysis. Publication of a book (an outcome of the international symposium) edited by 	

	<ul style="list-style-type: none"> • 32 invited presentations completed by the project team. • 2 book chapters in press. 	international researchers will be coming together to focus on one of the key findings from this project – that feedback needs to be conceived of as a process that includes impact.	three members of the project team focusing on 'Feedback that makes a difference'.
4. Narrow opportunistic adoption (at participating institutions)	<ul style="list-style-type: none"> • Workshops were held with academic and professional staff at Monash and Deakin Universities. Meetings and roundtables were also held with senior leaders. • All feedback session participants received a copy of the framework, and links to the resources. The Phase 4 survey results suggested that the majority of feedback session attendees would adopt the information to improve their practice. 	<ul style="list-style-type: none"> • Further workshops are planned at Monash University and The University of Melbourne in 2018. These should lead to more widespread adoption of practices and policy changes. • As noted above, enhanced feedback practices should lead to improved student learning and experience, such as enhanced capacity for seeking feedback and self-regulated learning. 	
5. Narrow systemic adoption (at participating institutions)	<ul style="list-style-type: none"> • While there has not been any immediate policy change at participating institutions, change is likely in the future. For example, Monash University has recently implemented a video feedback platform called Panopto in recognition of the value of rich, dialogical feedback. 		
6. Broad opportunistic adoption (at other institutions)	<ul style="list-style-type: none"> • Changed practices of up to 492 academic developers, instructional designers and lecturers from Australian universities who were inducted into the framework, including 	<ul style="list-style-type: none"> • Snowballing impact from the workshops – especially driven by participants in academic development and leadership roles – leading to improved 	<ul style="list-style-type: none"> • Take-up of practices through dissemination of findings, e.g. via

	<p>designing for feedback and conditions for success.</p>	<p>student learning and experience and improved student capacity for seeking feedback and self-regulated learning. This in turn feeds into the broad systemic adoption.</p> <ul style="list-style-type: none"> • In the Phase 4 survey, 84.8 per cent said that they had or were intending to change their practice in the future, and 90.7 per cent said that they would share the information with colleagues. We are also aware of several examples of academics writing blog posts on university websites based on the information from the workshops and framework. 	<p>conference presentations.</p>
<p>7. Broad systemic adoption (at other institutions)</p>	<ul style="list-style-type: none"> • Raising of awareness of framework and policy implications via the Phase 4 leadership roundtables conducted with over 60 leaders. • The Phase 4 survey, which included the conditions for success, was sent to 304 senior leaders from 41 Australian universities and 346 feedback session registrants. The survey was completed by senior leaders and managers from all 34 of 41 Australian universities. 	<ul style="list-style-type: none"> • Raising awareness through reference group that includes peak bodies such as CADAD, ACODE, etc. • Policy changes and funded initiatives. • Further dissemination of project findings through conferences run by HERSDA and Ascilite. 	

Appendix D: Dissemination activities

Media coverage

Findings from the project were featured in an article published in The Conversation:

1. Henderson, M. (2017, November 28). [Universities are failing their students through poor feedback practices](#). *The Conversation*.

In only two months, the article was accessed by 10,334 readers, tweeted 185 times, and shared 1110 times via Facebook and LinkedIn. In addition to The Conversation article, the project findings have been discussed on social media, including over 100 tweets using the project hashtag #feedbackforlearning. There were also over 20 project related tweets from the project team, which attracted more than 120 retweets and 170 “likes”.

Publications and presentations

The project team has published one journal article, has two book chapters in press, and completed five conference presentations. There is a great deal of interest in our work – an advance online publication version of the article by Ryan and Henderson has been viewed 227 times since December 2017, and received 28 tweets (by users with an upper bound of 17,223 followers).

With regard to forthcoming dissemination, one journal article has been accepted and another two are under review. These are based on Phase 1 survey data, and explore issues of feedback usefulness, effectiveness, and understandings. Four more journal articles are currently in preparation, and will be submitted in due course. In addition, one international conference presentation has been accepted for 2018 (listed below), and two further proposals have been submitted for review.

Journal articles

1. Ryan, T. & Henderson, M. (2017). Feeling feedback: students’ emotional responses to educator feedback. *Assessment and Evaluation in Higher Education* [advance online publication]. doi:10.1080/02602938.2017.1416456

Book chapters

2. Dawson, P., Henderson, M., Ryan, T., Mahoney, P., Boud, D., Phillips, M., & Molloy, E. (in press). Technology and feedback design. In D. Ifenthaler (Ed.), *Learning, Design, and Technology. An International Compendium of Theory, Research, Practice, and Policy*. Springer.
3. Henderson, M., Phillips, M., & Ryan, T. (in press). Dialogical feedback in the age of massification. In D. Boud, R. Ajjawi, P. Dawson & J. Tai (Eds.) *How good is this? Using assessment to develop evaluative judgement in higher education*. Taylor & Francis.

Conference presentations

4. Henderson, M., Dawson, P., Ryan, T., Boud, D., Phillips, M., & Mahoney, P. (2017, July). *What are effective feedback practices? Views from staff, students and the literature*. Paper presented at the Assessment in HE Conference, Manchester, U.K.
5. Boud, D., Dawson, P., Henderson, M., Ryan, T., & Phillips, M. (2017, August). *Student roles in effective and ineffective feedback*. Paper presented at the 17th Biennial EARLI Conference for Research on Learning and Instruction, Tampere, Finland.
6. Ryan, T., Henderson, M., & Phillips, M. (2017, October). *Digitally recorded feedback: a sustainable practice?* Paper presented at The Asian Conference on Education 2017, Kobe, Japan.
7. Henderson, M., Ryan, T., Phillips, M., Dawson, P., Boud, D., Molloy, E., Mahoney, P. (2017, December). *Assessment feedback: more modality matters*. Poster presented at the 34th International Conference on Innovation, Practice and Research in the Use of Educational Technologies in Tertiary Education, Toowoomba, Australia.
8. Winstone, N. & Boud, D. (2017, December). *Supporting students' engagement with feedback: The adoption of student-focused feedback practices in the UK and Australia*. Paper presented at the Society for Research into Higher Education Annual Research Conference, South Wales, UK.
9. Boud, D. (accepted for 2018, June). *Building a national resource for feedback improvement*. Paper to be presented at the Transforming Feedback: Research and Development Conference 2018, Manchester, U.K.

The project website will be updated with publication information over time.

Invited presentations

Project findings have also been disseminated through various local, national and international keynote presentations, masterclasses, workshops, and seminars. Phillip Dawson also presented a webinar hosted by Turnitin that was attended by 220+ people and viewed by a further 418 people.

1. Molloy, E. (March 2017). *Feedback in the Workplace: Doing it better*. Keynote presentation at Tri-Nation Alliance International Medical Symposium. Melbourne, Australia.
2. Molloy, E. (March, 2017). *Inviting the learner into feedback: Competency Based Medical Education*. Presentation at Tri-Nation Alliance International Medical Symposium, Melbourne.
3. Henderson, M. (May, 2017). *Are we missing the point? Learning is facilitated by feedback, not assessment*. Opening panel presentation and paper: Critical Conversations at Monash Education Academy Learning and Teaching Conference.
4. Molloy, E. (May, 2017). *Thinking about doing feedback better*. Presentation at the International Conference on Surgical Education and Training (ICOSSET) Adelaide, Australia.
5. Boud, D. (June, 2017). *Rethinking and redesigning feedback for greater impact on learning*. Pre-conference workshop at St Mary's University, Halifax, Nova Scotia.

6. Boud, D. (June, 2017). *Rethinking and redesigning feedback for greater impact on learning*. Masterclass at the International Conference on Assessment in Higher Education (AHE), Manchester, UK.
7. Phillips, M., Henderson, M, Ryan, T. (June, 2017). *Assessment feedback at Monash*. Presentation for the Monash Education Academy, Monash University, Melbourne, Australia.
8. Henderson, M., Ryan, T., Phillips, M., Boud, D., Dawson, D., Molloy, E., Mahoney, P. (June, 2017). *First year experiences in feedback*. Presentation at Maynooth University, Ireland.
9. Molloy, E. (2017, June). *Feedback and Assessment Design: What does it mean?* Centre for Study Higher Education Podcast Series. The University of Melbourne, Melbourne.
10. Dawson, P. (2017, August). *Feedback design workshop*. Workshop at Victoria University, Wellington NZ.
11. Boud, D. (2017, September). *Sustainable assessment and online learning*. Seminar at Edinburgh Business School. Edinburgh, Scotland.
12. Boud, D. (2017, September). *Workshop on assessment and feedback*. Workshop at RMIT University, School of Education. Melbourne, Australia.
13. Molloy, E. (2017, September). *Feedback for Learning*. Centre for Study Higher Education 'Lectern Series'. The University of Melbourne, Melbourne.
14. Phillips, M. (2017, September). *Digital education workshop*. Workshop at Bahagian Teknologi Pendidikan. Kuala Lumpur, Malaysia.
15. Boud, D. (2017, October). *Rethinking and redesigning feedback for greater impact on learning*. Workshop at Western Sydney University. Sydney, Australia.
16. Dawson, P. (2017, October). *Designing feedback for improved learning*. Webcast presented by Turnitin. Watch [here](#).
17. Dawson, P. (2017, October). *Designing better feedback processes*. Workshop presented at University of the Sunshine Coast.
18. Molloy, E. (2017, October). *Designing feedback for learning: Moving forward from a practice of telling*. Keynote presentation at Momentum 2017 Physiotherapy Conference. Sydney, Australia.
19. Phillips, M. (2017, October). *Feedback – targeted and personal*. Presentation at Faculty of Medicine, Nursing and Health Sciences, Monash University. Melbourne, Australia.
20. Phillips, M. (2017, October). *From good schools to great schools: What their principals do well*. Presentation at the ANPS Leadership Forum. Bogor, Indonesia.
21. Boud, D. (2017, November). *Feedback that makes a difference for learning: implications for problem-based learning*. Keynote presentation at Nordic Problem-Based Learning Network Annual Meeting. Linköping, Sweden.
22. Boud, D. (2017, November). *Ensuring assessment has a high impact on learning*. Keynote presentation at Conference on Assessment for Learning and Authentic Assessment. Santiago and Concepcion, Chile.
23. Boud, D. (2017, November). *Designing assessment and feedback to build students' capacity to judge their own work*. Keynote presentation at National Assessing Learning Conference. Dunedin, New Zealand.

24. Boud, D. (2017, November). *Rethinking and redesigning feedback for greater impact on learning*. Workshop at National Assessing Learning Conference. Dunedin, New Zealand.
25. Molloy, E. (2017, November). Australian Medical Council (AMC) Symposium on Programmatic Assessment. Workshop on *Building feedback and assessment literacy: A national professional development initiative*, Melbourne Convention Centre, Melbourne.
26. Boud, D. (2018, January). *Thinking differently about feedback: learning in courses and in work*. Workshop at Middlesex University. London, UK.
27. Boud, D. (2018, January). *Developing feedback practices based on what students want and sound research and scholarship*. Seminar at University of Kent. Canterbury, UK.
28. Boud, D. (2018, January). *Assessment and feedback for enhancing learning*. Masterclass at Canterbury Christ Church University. Canterbury, UK.
29. Molloy, E. (2018, February). *Feedback Literacy for learners and teachers: What does it mean?* Presentation at University of Otago, New Zealand.
30. Henderson, M. (2018, March). *Assessment feedback loops*. Workshop at Monash Institute of Pharmaceutical Sciences.
31. Phillips, M. (2018, March). *Multimedia feedback: Clear, powerful and personalised*. Presentation at the College of William and Mary. Virginia, USA.
32. Phillips, M. (2018, March). *Feedback to support peer online mentoring*. Presentation at English Connect, Monash University. Melbourne, Australia.

2018 International symposium on feedback

As a result of the work in this project, the project team are hosting an international symposium later in 2018 which brings together leading researchers from around the world. The symposium will be followed by an edited book.