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Conditions that support effective assessment feedback in higher education

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Abstract

Feedback practices represent a significant investment in resources and emotion for educators and students. While there are pockets of excellence, research continues to highlight that feedback practices cannot be simply parachuted from one context to another and be expected to work just as effectively. This paper presents twelve underlying conditions that support effective feedback, and has stemmed from an extensive 18-month Australian government funded project. This large scale mixed-method project was innovative by adopting a socioecological perspective, seeking the broader contextual and historical factors that shaped, supported and inhibited effective feedback. Phase 1 involved a large scale survey (n = 4920) and focus groups (n=43) with staff and students from two Australian universities to identify effective practices. Phase 2 explored seven case studies of effective feedback from Phase 1 data, and involved interviews with 34 staff and students. Phase 3 involved the iterative development of the framework of effective feedback. This framework was further honed through workshops with 295

academic staff and roundtables with 66 senior university leaders at seven Australian universities. Phase 4 involved a survey of academic staff and senior leaders (n = 250) from 39 Australian universities, in which the twelve conditions were evaluated. The final conditions reported in this paper provide institutions, leaders, and educators with innovative and empirically grounded guidance regarding how to enhance capacity for feedback, improve feedback designs, and foster effective feedback cultures.

Keywords: assessment feedback, effective feedback practices, higher education

Introduction

The higher education sector has a critical need for a useful and usable approach to improving feedback to promote student learning and experience. Despite large investments across the sector, students continue to be highly critical of how feedback is enacted. Feedback is a key issue for all universities in Australia, and many are investing heavily in trying to improve practices. At the same time there is evidence from TEQSA/AUQA audits, as well as the national Graduate Course Experience survey (Carroll, 2014), that student experience of feedback continues to be poor. In some cases, it is highlighted as the worst aspect of courses. This is not a new situation. The Bradley Review of Higher Education in 2008 concluded that “greater productivity of the sector... are being achieved at the expense of time spent with individual students, good feedback on assessment and social interactions” (Bradley, 2008, p. 74). This issue is also not unique to Australia: the results of the UK’s recent national student survey reveal that feedback has a low satisfaction score (Higher Education Statistics Agency, 2017).

While there is a growing body of literature surrounding feedback, there continues to be little consensus on what works and why. Leading researchers have proposed a number of models of feedback. For example, Hattie and Timperley (2007) proposed a model of reducing discrepancy between current and desired understanding. Carless, Salter, Yang, and Lam (2011) advocated for a framework of sustainable feedback, drawing heavily on the significant work of Nicol and Macfarlane-Dick (2006), in which they devised seven principles of feedback design. Moreover, Boud and Molloy (2013) have proposed two models: Feedback Mark 1 and Feedback Mark 2. In addition many other researchers have developed their own principles of feedback. For example, an extensive literature review of assessment feedback in higher education by Evans (2013) synthesised 23 general principles of effective feedback. Most recently, Henderson and Phillips (2015) synthesised eight broad principles specific to feedback artefact design.

Evidently, “there are many strategies that can considerably enhance the positive impact of feedback ... and there are many options for what we can usefully do” (Boud & Molloy, 2013a, p. 1). Therein lies a significant problem for the Higher Education sector. Which options work - and when? Just as importantly - why do some options not work? Despite the considerable literature in the field, there is no clear explanation of the broader ecological system within which feedback success is embedded. In other words, we have a surfeit of feedback models, frameworks, principles, and strategies with little guidance on how to choose amongst them. As Boud and Molloy (2013) conclude in their book *Feedback in Higher and Professional Education* “without this research, the arguments remain plausible suggestions” (p.217).

Project context

This paper presents rigorous and groundbreaking findings from an 18-month project that was funded by the Australian Government. In doing so, it addresses the conference sub-theme of innovation in two ways.

First, this paper shares new knowledge surrounding feedback practices. Throughout this project, there has been significant interest from educators in professional development around feedback, and institutions and faculties have been capitalising 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.

Second, this paper showcases an innovative approach to research feedback practice. It is well established that the nature of innovation and change in educational institutions is highly complex and contingent on multiple and often-contradictory influences over time (Fullan, 2007). This project therefore started from the premise that any study of innovation in education needs to recognize the *systemic* nature of educational activity, and strive to develop understandings of the dynamics of how old and new feedback practices become embedded in the broader 'ecology' of local practice. The ecological approach provides a powerful framework for understanding complex human social issues (see for example, Bronfenbrenner, 1977; Bruce & Hogan, 1998; Lemke, 1994; Zhao & Frank, 2003). Such an ecological approach also serves to clarify the institutional policies, practices, cultures, and routines that serve to manage the appropriation of practices from one context to another. Understanding the university 'ecology' therefore highlights the varied influences at the level of the individual student and teacher, alongside the layered 'context' of the classroom, faculty, university, local community, state, and nation, as well as the presence of many different competing innovations at any one time.

As such, this project was careful to recognize the wide range of 'micro', 'meso' and 'macro' level factors that bear on the success of any educational practice. Indeed, Selwyn (2014) has demonstrated over many years how the success of innovations in technology enabled learning cannot be fully understood without also taking into consideration broader socio-ecological issues. An example is the tension between the institutional drive towards increasingly massified classes, and the push for increasingly student centred approaches. Another example is the way in which labour models within many universities quantify the work of "marking" but not that of "feedback", and as such reinforces dominant conceptions of the labor of assessment. These kinds of 'ecological' factors need to be included in any examination of realistic innovation and change across the university sector.

Project design

This paper presents twelve conditions that support effective feedback. These conditions are one of the key features of a framework of effective feedback, which itself is one of the main findings from a broader research project.

The broader project took place over an 18-month period and involved four phases of research in which more than 6000 university staff and students participated (see Figure 1). Although the conditions that support effective feedback are technically one part of the framework that was developed in Phase 3, they actually arose through data collected and analysed in all four phases. As such, it is useful to present a brief overview of the entire research design before focusing on the specific method used to develop the conditions for success.

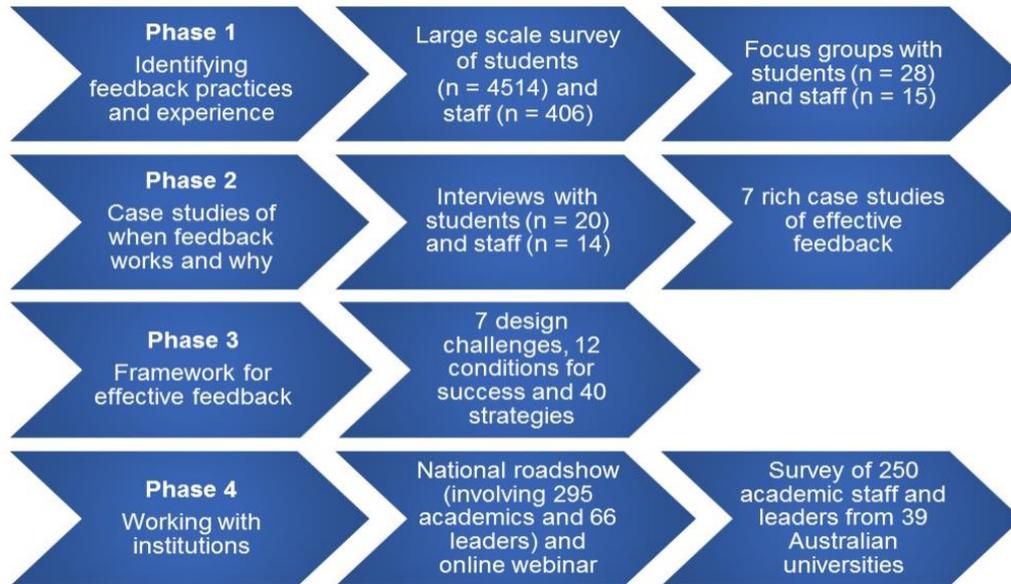


Figure 1. Project phases

Phase 1: Identifying feedback practices and experiences

As illustrated in Figure 1, Phase 1 was dominated by two overlapping stages of data collection: a large-scale survey and focus groups with staff and students. The survey focused on staff feedback practices and student feedback experiences, and was administered to respondents at two large Australian universities. Follow-up focus group interviews were then conducted with students and educators at the same universities. The key motivations for collecting these data was to examine how feedback is actually being used, and identify patterns of feedback success. Data relating to the latter were used to triangulate best practice case studies for Phase 2.

Phase 2: Case studies of when feedback works and why

From the rich data collected in Phase 1, diverse examples of ‘promising’ or ‘best’ feedback practices were identified from different subjects and courses across the two universities. These included cases that were clearly reported as having a positive impact on student learning outcomes and experience. The effectiveness of these practices were triangulated by conducting interviews with student and teachers from each subject, and resulted in seven rich case studies of effective feedback.

Phase 3: Framework for effective feedback

Data collected in Phases 1 and 2, along with the academic literature and input from an external reference group of feedback practitioners and experts, confirmed that the sector needs a better understanding of the underlying conditions that supported the evolution of effective feedback practices. As a result, the third phase of this project involved development of a framework to support effective feedback practices.

The development of the framework involved multiple meetings between the project team, along with a three-day workshop with the project evaluator - 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 framework was then further refined through consultation with the project reference group, workshop participants, and senior leaders at Australian universities.

The resulting framework was heavily grounded in empirical evidence, and framed by an ecological perspective to highlight underlying conditions that enable effective feedback. 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 strategies for moving forward.

The final framework comprises:

2. a definition of effective feedback;
 - seven design challenges arising from the definition;
- twelve conditions for effective feedback, and;
 - forty strategies for enacting the twelve conditions.

As noted earlier, the twelve conditions for effective feedback are the focus of the current paper. However, details of the other components of the framework including the forty strategies and the case studies can be found at <http://feedbackforlearning.org>.

Phase 4: Working with institutions

Phase 4 involved distributing the findings to academics, educational designers, academic developers, and senior academic leadership throughout universities in Australia. The process of engaging with key stakeholders also enabled the project team to review and strengthen the framework developed in Phase 3. This phase of the project included several stages: a national 'roadshow' of participatory workshops and leadership roundtables in six capital cities across Australia, a public webinar, and a survey with senior leaders, academic staff, and professional staff from all Australian universities. While the results of the entire survey are beyond the scope of the current paper, a selection of data from senior leaders will be presented as it serves to validate the twelve conditions proposed within this paper.

Method for developing the conditions

The development of the conditions that support effective feedback was guided by the following research questions:

- How can effective feedback best be designed to promote learning?
- What conditions best support effective feedback at the task level, unit level, course level, and institutional level?

There were three main stages of development, which are outlined below.

Case study elicitation stage

In Phase 2, interviews were held with staff and students from the seven case study subjects. The interviews were conducted by five members of the research team, all of whom were experienced qualitative researchers immersed in feedback literature. As mentioned earlier, this

stage was conceptually informed by an ecological approach, and the interview questions focused on micro, meso, macro enabling factors.

Following data collection, each member of the project team took lead on one case and conducted preliminary analysis of the qualitative interview data and other resources (including subject guides, feedback examples, etc.). Each case lead then summarised the key features of each case, and shared them with the rest of the project team during a three-day workshop. The team, along with the project evaluator, together synthesized this information and created a list of potential conditions that enabled and challenged effective feedback. At this stage, the conditions were not restricted entirely to the seven cases, but were also informed by the feedback literature, and team members' personal experiences as experienced educators.

Following the workshops, each team member produced a detailed version of their case study, following a template including sections highlighting why the feedback design worked, enabling factors, challenges, and advice to educators, institutions, schools, and faculties. This process involved crosschecking details with one other member of the team (generally someone who had been involved in the original interviews) before the case study reports were finalised. Once they were complete, key points from each section (e.g., why the design worked, enabling factors, etc.) were extracted from every case and added to the list of conditions developed in the workshops

Data analysis stage

In Phase 3, two members of the project team refined the list of potential conditions that support effective feedback. This involved an iterative cross case analysis and checking that each condition was informed by the case study data. Language and concepts from the literature were also used to analyse the list of conditions. The same two members of the project team omitted conditions that were not supported by cases, and grouped the remaining conditions into overarching themes. The conditions and overarching themes were then checked by the entire research team to ensure that they were grounded in the cases.

Synthesis and verification phase

The final conditions and themes were tested for relevance and adequacy during Phase 4 with educators, senior leaders, and the reference group of experts. Feedback from these sources was used to improve, revise, and finalise the conditions. A survey was then conducted in which educators, professional staff, and senior leaders from every Australian university were invited to evaluate the importance of the final twelve conditions. Response options ranged from 1 = "not at all important" to 5 = "extremely important".

While the survey was completed by 250 respondents from 95 per cent of Australian universities, only data from senior leaders (e.g., Vice-Chancellors, Deputy Vice-Chancellors, Deans, Associate Deans, etc.) are reported for the purposes of this paper. This subsample included 78 respondents from 83 per cent (34 of 41) of Australian universities.

Findings

The final twelve conditions that support effective feedback are presented in Table 1, along with a brief description of each. Conceptually, the conditions are thematically organized into three groups: capacity for feedback, designs for feedback, and culture for feedback. Although this

paper reports the twelve conditions, further details including case study elaborations can be found at the project website <http://feedbackforlearning.org>.

Table 1. Brief descriptions for the twelve conditions of success.

Theme	Condition for success	Brief description
Capacity for feedback	1. Learners and educators understand and value feedback	Feedback is not an artefact (e.g., comments), nor is it an attempt to justify a grade. It is a process in which learners need to make sense of information about their performance and use it to enhance the quality of their work or learning strategies.
	2. Learners are active in the feedback process	Learners need to develop strategies to evaluate their own performance, as well as engage in feedback processes independently. It is critical that educators foster this independence.
	3. Educators seek and use evidence to plan and judge effectiveness	Effective feedback design involves continually challenging and improving one's own practice. This necessitates a degree of self-reflection on the part of educators, along with an inquiry mindset.
	4. Learners and educators have access to appropriate space and technology	Both technology and novel learning environments can facilitate innovation of teaching practice in ways that can be highly engaging for learners.
Designs for feedback	5. Information provided is usable and learners know how to use it	Educator-provided feedback comments are clearly interpretable by the learner, and provided in time to be used on a subsequent task.
	6. It is tailored to meet the different needs of learners	It is unlikely that a single feedback design will be effective for every type of learner, so it is important to try to understand the nature of different cohorts. It can also be worthwhile for educators to pay attention to each learner's individual strengths and weaknesses, and their personal barriers and motivations.
	7. A variety of sources and modes are used as appropriate	Effective feedback involves providing information to learners through a range of sources and modes. Learners do not process, engage, or are motivated in the same way. Feedback information does not need to come solely from the educator. Peers, automated sources and students themselves can be powerful sources of information.
	8. Learning outcomes of multiple tasks are aligned	Effective feedback design therefore involves the alignment of multiple assessment tasks with linked competencies, interspersed with opportunities for learners to seek and receive useful information that can influence their next task. To enable this, educators should consider designing assessment tasks, assessment criteria, and feedback approaches simultaneously, so that they are all aligned and relevant to the learning outcomes.

Culture for feedback	9. It is a valued and visible enterprise at all levels	The success of feedback is facilitated when institutions are seen to value it in its systems, policies and activities. In other words, effective assessment feedback is a valued and genuine part of the university culture.
	10. There are processes in place to ensure consistency and quality	Diversity in the experience and skill level of educators can raise issues for learners, as they may feel disgruntled and dissatisfied if they do not receive the same level of high-quality feedback as their peers. To avoid such scenarios, it is important for teaching staff and leadership in tertiary institutions to recognise that feedback is something that needs to be learned and continually improved upon.
	11. Leaders and educators ensure continuity of vision and commitment	Continuity in leadership not only provides connections with past feedback designs but also allows for longer term plans for feedback redesigns to be developed and implemented.
	12. Educators have flexibility to deploy resources to best effect	Effective feedback design can be challenging in contexts where workloads, labour models, or subject structures are overly prescriptive. It is therefore important to seek feedback designs that do not require educators to resort to heroic, unsustainable workplace practices.

Table 2 presents means and standard deviations for the importance of each condition, as rated by senior leaders of Australian universities. As the means range from 3.92 – 4.84, it appears that most respondents found the conditions to be “very important”. These results strongly suggest that the conditions presented in this paper are relevant and appropriate to the higher education sector.

Table 2. Senior university leaders’ ratings of the importance of each condition for success.

Conditions for success	<i>n</i>	Mean	SD
1. Learners and educators understand and value feedback	76	4.84	(.37)
2. Learners are active in the feedback process	77	4.60	(.69)
3. Educators seek and use evidence to plan and judge effectiveness	77	4.39	(.67)
4. Learners and educators have access to appropriate space and technology	77	3.92	(.94)
5. Information provided is usable and learners know how to use it	75	4.72	(.51)
6. It is tailored to meet the different needs of learners	76	4.24	(.83)
7. A variety of sources and modes are used as appropriate	76	4.01	(.89)
8. Learning outcomes of multiple tasks are aligned	74	4.38	(.85)
9. It is a valued and visible enterprise at all levels	76	4.39	(.77)
10. There are processes in place to ensure consistency and quality	77	4.65	(.64)
11. Leaders and educators ensure continuity of vision and commitment	76	4.37	(.80)
12. Educators have flexibility to deploy resources to best effect	77	4.26	(.75)

Although the university leaders reported the conditions to be very important, it is interesting that conditions 4 and 7, both relating to the materialities of the feedback process, were notably less positive. In the full elaborations of these conditions, the survey participants were presented with descriptions of strategies drawn from the case studies, including: the use of collaborative learning spaces to support immediate feedback; the use of technologies to enhance the richness of feedback information; the demonstrable need for learners to engage in feedback cycles with a variety of sources; and how feedback was usefully tailored to different kinds of tasks. The relatively lower ranking of these conditions perhaps reveals a continuing tendency to perceive feedback in traditional ways, as an act of ‘giving’ comments and grades from the educator to the student. Instead, in our study, feedback was noted across many of the cases as a process involving a variety of sources, modes and contexts.

Conclusion

The conditions that support effective feedback stem from empirical data collected during all four phases of this project. They were collated through a rigorous iterative process involving many stakeholders, and were honed into twelve factors which contribute to effective feedback practices. This is not to suggest that these are the only conditions that support effective feedback, nor that they all need to be simultaneously present to ensure success. However, in the seven rich case studies developed in Phase 3, one or more of the following conditions were observed as being a significant factor in the success of the feedback practices.

A considerable influence on the approach used in this project was the realisation that amongst the surfeit of models, frameworks, policies and strategies of feedback, there was no clear guidance on how to choose the most effective for a particular context. The need to understand why some approaches work in one context and not another means that we need to explore the wider social and institutional factors. This project was unique in applying large scale quantitative methods with 'rich and thick' qualitative methods to not only document what works, but also provide a deeper understanding of the conditions that led to that success.

The focus on the broader context of success not only helps to understand that success, but also serves to illuminate how impact can be sustained beyond this project. The findings of this project are equally relevant to educators, instructional designers, administrators and leaders. Indeed, changes in the three groups of conditions (capacity, designs and culture) take time and, arguable, can only be achieved together.

Feedback is a complex process, and its success is as much about the context and individuals involved as it is about pedagogy. The twelve conditions that support effective feedback highlighted in this study indicate that successful feedback practices were influenced by the feedback design, people, institution, and culture involved. Therefore, to engender effective feedback, one needs to consider more than simply the feedback strategy or content.

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References

- Boud, D., & Molloy, E. (2013). What is the problem with feedback? In D. Boud & E. Molloy (Eds.), *Feedback in higher and professional education: Understanding it and doing it well* (pp. 1-10): Routledge.
- Bradley, D. (2008). *Review of Australian Higher Education*. Retrieved from Canberra:
- Bronfenbrenner, U. (1977). Toward an experimental ecology of human development. *American Psychologist*, 32(7), 513-531.
- Bruce, B. C., & Hogan, M. P. (1998). The disappearance of technology: Toward an ecological model of literacy. In D. Reinking, M. C. McKenna, L. D. Labbo, & R. D. Kieffer (Eds.), *Handbook of literacy and technology: Transformations in a posttypographic world* (pp. 269-281). Mahwah, NJ: Erlbaum.
- Carless, D., Salter, D., Yang, M., & Lam, J. (2011). Developing sustainable feedback practices. *Studies in Higher Education*, 36(4), 395-407. doi:10.1080/03075071003642449
- Carroll, D. (2014). *Graduate course experience 2013: A report on the course experience perceptions of recent graduates*. Melbourne: Graduate Careers Australia.

- Evans, C. (2013). Making sense of Assessment Feedback in Higher Education. *Review of Educational Research*, 83(1), 70-120.
- Fullan, M. (2007). *The new meaning of educational change* (4th ed.). New York: Teachers College Press.
- Hattie, J., & Timperley, H. (2007). The Power of Feedback. *Review of Educational Research*, 77(1), 81-112. doi:10.3102/003465430298487
- Henderson, M., & Phillips, M. (2015). Video-based feedback on student assessment: scarily personal. *Australasian Journal of Educational Technology*, 31(1), 51-66.
- Higher Education Statistics Agency. (2017). *Students in Higher Education 2015/16*. Retrieved February 19, 2017, from <https://www.hesa.ac.uk>.
- Lemke, J. L. (1994). Discourse, dynamics, and social change. *Cultural Dynamics*, 6(1), 243-275.
- Nicol, D., & Macfarlane-Dick, D. (2006). Formative assessment and self-regulated learning: a model and seven principles of good feedback practice. *Studies in Higher Education*, 31(2), 199-218.
- Selwyn, N. (2014). *Degrees of digitization: digital technology and the contemporary university*. London: Routledge.
- Zhao, Y., & Frank, K. A. (2003). Factors Affecting Technology Uses in Schools: An Ecological Perspective *American Educational Research Journal*, 40(4), 807-840.

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