

What makes for effective feedback: staff and student perspectives

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Abstract

Since the early 2010s the literature has shifted to view feedback as a process that students do where they make sense of information about work they have done, and use it to improve the quality of their subsequent work. In this view, effective feedback needs to demonstrate effects. However, it is unclear if educators and students share this understanding of feedback. This paper reports a qualitative investigation of what educators and students think the purpose of feedback is, and what they think makes feedback effective. We administered a survey on feedback that was completed by 406 staff and 4514 students from two Australian universities. Inductive thematic analysis was conducted on data from a sample of 323 staff with assessment responsibilities and 400 students. Staff and students largely thought the purpose of feedback was improvement. With respect to what makes feedback effective, staff mostly discussed feedback design matters like timing, modalities and connected tasks. In contrast, students mostly wrote that high-quality feedback comments make feedback effective – especially comments that are usable, detailed, considerate of affect, and personalised to the student's own work. This study may assist researchers, educators and academic developers in refocusing their efforts in improving feedback.

Keywords: assessment feedback; purpose of feedback, effective feedback

Introduction

Feedback can be one of the most powerful influences on student learning (Hattie and Timperley 2007). The research literature contains numerous studies on feedback approaches that are regarded as effective, and these have been synthesised in several review studies (Hattie and Timperley 2007; Shute 2008). The evidence base on feedback has also been used to develop several conceptual models that have been influential in our understandings of how feedback should be done (Carless *et al.* 2011; Boud and Molloy 2013). Substantial advice is thus available on how feedback might be made more effective.

In contrast to the effective feedback possibilities expounded in the literature, students generally report in surveys that feedback is done poorly in higher education, compared with other aspects of their studies (Carroll 2014; Higher Education Funding Council for England 2014; Bell and Brooks, in press). However, a substantial problem with student satisfaction surveys (particularly the UK's National Student Survey and its Australian equivalent) is that they are based on an outmoded understanding of feedback. Questions tend to ask if students are happy with the volume or quality of comments they receive from their educators (Winstone and Pitt 2017); this contrasts with a strong shift in the literature over the past decade towards understandings of feedback as a process that leads to further learning (Sadler 2010; Carless *et al.* 2011; Molloy and Boud 2013).

The meanings of various terms in the field of assessment and feedback have changed over recent decades (Cookson, in press). The early 2010s marked a shift in how feedback was positioned within the literature, with understandings of feedback moving from something 'given' to students towards feedback as a process in which students have an active role to play. Where Shute's (2008) review of feedback focused on 'information communicated to the learner', and Hattie and Timperley (2007) focused on 'information provided by an agent', more recent understandings reposition feedback within its conceptual roots in biology or engineering, as a process leading to improved work (Boud and Molloy 2013). This shift in

how feedback is understood places emphasis on many more features of feedback than just the provision of ‘hopefully useful’ comments from educators to students. The conceptualisations of feedback currently prominent in the literature consider the entire feedback process, driven by the student rather than the educator, involving a multitude of players, and necessarily involving the student making use of information to effect change. The literature has thus moved forward in how it understands feedback – but it is not clear if those involved in feedback have been brought along with it.

Prior to this shift in the early 2010s, there had been a range of studies about staff and student perceptions of feedback. Some focused only on what students thought. For example, Poulos and Mahony (2008) found that health students at an Australian university were interested not just in modality and timeliness, but also the credibility of the feedback source. In studies that considered both staff and student perspectives, there were generally discrepancies between student and educator perceptions of feedback practices. For example, in one Hong Kong study, educators tended to report a much more positive picture than students when both were asked similar questions about feedback (Carless 2006). An Australian study found a similar mismatch between educators’ espoused feedback theories and practices and their actual feedback behaviours, with actual practices often falling short of individuals’ ideals (Orrell 2006). The general message appears to be one of inconsistencies between understandings of actual practices, educator perspectives, and student perspectives (Li and De Luca 2014).

However, since the shift in researcher and expert understandings of feedback in the early 2010s, there has been a dearth of studies on what staff and students experience as effective feedback. In particular, there has been a lack of studies that include both staff and students from a range of institutional and disciplinary contexts. The typical post-2010 study on perceptions of feedback focuses on a single discipline at a single institution, with a convenience sample of less than 200 student research participants and no staff participants

(e.g. Dowden *et al.* 2013; Robinson *et al.* 2013; Bayerlein 2014; Pitt and Norton 2017).

While there have been a handful of studies that also include a small number of staff or several disciplines (e.g. Orsmond and Merry 2011; Sanchez and Dunworth 2015; Mulliner and Tucker 2017), these have still largely been single-institution studies with cohorts skewed toward particular genders and concentrated in limited discipline groups. Given Sadler's (2010) caution about the need to be careful when generalising in feedback research, there is a need for studies that are more inclusive and comprehensive in terms of disciplines, institutions, year levels, gender and other characteristics.

The lack of broader studies on staff and student perceptions of feedback is problematic, because we do not know to what extent staff and students have been brought along with the changing understandings of feedback occurring in the literature. In assessment more broadly, educators are the people who design what students are expected to do, and their opinions about what is effective may be more influential than research evidence about what occurs (Bearman *et al.* 2017). Similarly, in a process-oriented conceptualisation of feedback, students are the main actors (Boud and Molloy 2013), and their understandings of what feedback is for and what makes it effective are necessary to implement sophisticated designs.

This paper addresses a gap in our understanding around what educators and students think feedback is for, and what they think makes for effective feedback, through qualitative analysis of a purposive sample from a large-scale feedback survey. In particular, it addresses the following research questions:

RQ1: What do staff and students think is the purpose of feedback?

RQ2: What do staff and students think makes for effective feedback?

Method

We administered a large-scale survey about feedback to staff and students at two Australian

universities in 2016-2017. The survey instrument is available at www.feedbackforlearning.org/wp-content/uploads/Feedback_for_Learning_Survey.pdf and is free to use under a Creative Commons ShareAlike 4.0 International License. Valid responses were received from 4514 students and 406 staff. The survey was primarily quantitative, but it also included a small number of open response items. This paper reports on our qualitative analysis of a subset of the open response data where staff with assessment responsibilities (i.e. educators) and students discussed what they thought feedback was for, what they thought constituted effective feedback, and gave examples of effective feedback they had experienced.

The survey data were collected as part of the first phase of a research project funded by the Australian government Office for Learning and Teaching and undertaken by two Australian universities. The project had the broad focus of seeking to understand the feedback experiences and practices of coursework students and university staff (both academic and professional). Approval was received from the Human Research Ethics Committees of both universities prior to all data collection. Participation in the survey was voluntary, and participants were offered the opportunity to go into a prize draw for a small incentive. We acknowledge that both the opt-in nature of the study and the incentive may affect the representativeness of the participants recruited.

Sample

Resource constraints dictated that we needed to sample the data in order to conduct in-depth qualitative analysis. We therefore opted for a sample of 200 student responses from each institution (total N = 400) that was representative of the characteristics of the overall populations in terms of gender, international/domestic enrolment, online/on-campus enrolment, and faculty. As the entire dataset of educators was of comparable size (n=323 participants) we opted to use all data from teaching staff rather than a sample.

Analysis

For this paper, analysis focused on a subset of two open-response questions. Students and staff with assessment responsibilities were asked to: (a) state what they saw as the purpose of feedback; and (b) state why they considered a recent, self-selected instance of feedback had been effective.

We conducted a thematic analysis of the data similar to the process described by Braun and Clarke (2006). As with any thematic analysis, a series of choices were made during the research design that shaped the themes developed and the outcomes of the analysis. Ontologically, the study is broadly based in realism (Maxwell 2012); we think the participants experience feedback as a real thing, and it is possible for educators and students to have very different experiences of the same feedback reality. We undertook an inductive analysis, with the acknowledgement that as feedback researchers we bring a set of domain theory to the topic, and that we actively construct themes rather than have them passively ‘emerge’ from the data (Varpio *et al.* 2017). We developed ‘semantic’ themes (Braun and Clarke 2006), because we were more interested in what our participants explicitly wrote than we were in identifying latent meanings; responses to open-ended qualitative survey questions often tend to be too ‘thin’ to support deeper forms of analysis (LaDonna *et al.* 2018).

Our coding framework was developed through an iterative process of reading subsets of the data, sharing notes, and testing preliminary codes. This process involved four researchers (MH, PD, MP, TR) going through five major iterations. Once a preliminary framework was developed through this process it was shared as a codebook with another researcher not involved in its development (PM), who then coded data from 50 participants before making minor amendments to the codes in consultation with two members of the research team (PD, MH). The final framework was then applied to the entire sample.

Results and discussion

This section is structured around the two core research questions for this study. Data relating to each are presented in summary form, and analysis of each key theme is then reported and discussed. While we report on the prevalence of themes within the sample, we are cautious in making any claim of generalisability to the broader population. These themes are illustrative and establish a valuable foundation for critically reflecting on our cultures of feedback and for generating future lines of inquiry.

RQ1: What do staff and students think is the purpose of feedback?

Participants indicated four main purposes of feedback: justifying grades; identifying strengths and weaknesses of work; improvement; and affective purposes. The prevalence of each of these purposes is presented in Table 1 below, along with subthemes where we observed them. It should be noted that data presented in tables may add up to more than 100% because individual participants' data may have been coded in multiple themes.

Table 1. Broad category totals of different ideas about the purpose of feedback.

Purpose of feedback	Staff (<i>n</i>)	Staff (%)	Students (<i>n</i>)	Students (%)
Improve	289	89%	359	90%
Affective	44	14%	18	5%
Identify strengths and weaknesses	22	7%	26	7%
Justify grade	27	8%	15	4%

Is feedback about improvement, or justifying a grade?

The vast majority of responses expressed that feedback is about improvement, with 90% of students and 89% of staff mentioning some sort of improvement as a purpose of feedback.

For staff, an improvement purpose of feedback was ten times as prevalent as a grade justification purpose; for students, improvement was more than twenty times as prevalent as

justification. Improvement was regarded by some participants as an ‘obvious’ purpose of feedback, which is perhaps unsurprising given the prevalence of this theme. It is heartening to see such a high prevalence for improvement, as it is the fundamental element of popular feedback ideas such as those proposed by Carless *et al.* (2011), Sadler (2010) and Boud and Molloy (2013). However, when students and staff wrote about improvement, there was a marked difference in what they regarded as the object of improvement, as outlined in Table 2.

Table 2. Foci for ‘improvement’ purposes of feedback mentioned by staff and students.

Description	Staff (<i>n</i>)	Staff (%)	Students (<i>n</i>)	Students (%)
Unspecified improvement	83	26%	154	39%
Improvement in work	71	22%	126	32%
Improvement in understanding				
...of content/skills	64	20%	29	7%
...of progress	26	8%	13	3%
...of standards/learning objectives	23	7%	16	4%
(nonspecific improvement in understanding)	17	5%	14	4%
Improvement in learning/study strategy	50	15%	26	7%
Improvement in reflection, self-evaluation or critical thinking capability	26	8%	10	3%
Improvement in grades/outcomes	11	3%	12	3%

The most common response by participants was that the purpose of feedback was improvement but they did not state an object of the improvement. Those participants who referred to unspecified improvement may have implicitly assumed some default focus of improvement or an overall, general improvement.

Where participants did specify a particular focus for improvement, it was usually improvements to students’ work, improvements in understanding, or improvements in learning or study strategies. Building on work by Boud and Molloy (2013), Carless (2015)

defined feedback as “a dialogic process in which learners make sense of information from varied sources and use it to enhance the quality of their work or learning strategies.” (p. 192). The prevalence of improvements to both work and learning strategies in the data suggests that some educators and students share our own understanding of the purpose of feedback. It also suggests that some aspects of Hattie and Timperley’s (2007) recommendation that feedback should focus on improving self-regulation may be represented in the understandings of educators and students.

The assessment and feedback literature has recently increased its focus on the development of students’ understandings of quality and their ability to make decisions about quality work, known as ‘evaluative judgement’ (Tai *et al.*, in press). A small set of participants wrote about improvements related to evaluative judgement, such as improved self-evaluation or improved understanding of standards. However, evaluative judgement as an overarching capability was not a substantive presence in the dataset. Educators and students were predominantly focused on improvements to work, and an improvement in the ability to produce work, not on an improvement in the ability of students to evaluate work.

Pointing out strengths and weaknesses

The identification of strengths and weaknesses in student work was sometimes reported by participants without mention of the use of that information for improvement. This perhaps corresponds to older, information-centric understandings of the purpose of feedback, such that feedback is about telling students what is good and bad about their work, but not about telling students how to improve it or students using the information for improvement. A typical expression of this theme was made by one educator, who said the purpose of feedback was ‘to allow the student to see where their strengths and weaknesses for that task lie.’

Feedback to motivate and make students feel good

A small number of staff, and a smaller number of students, mentioned affective purposes for feedback. For these participants, one of the purposes of feedback was to motivate students to do better work, to acknowledge student effort, to encourage students, or to make them feel good about their work. One student noted that although it is not the primary purpose of feedback, if affective purposes are not attended to the results can be hurtful:

[The purpose of feedback is] primarily to improve in future, but also to compliment and motivate and provide positive reinforcement to the effort and time put in. It's absolutely shattering when the assessor does nothing but nit-pick and criticise with no positivity at all.

This was a somewhat common way of considering affect as a purpose of feedback: as a secondary but essential purpose.

RQ2: What do staff and students think makes for effective feedback?

Staff and students diverged more on what makes for effective feedback than they did for the purpose of feedback. When staff and students were describing what made a feedback experience effective, the prominent themes were the content of the comments, aspects of the feedback design, and the source of the feedback information. The prevalence of each of these top-level themes is in Table 3 below.

Table 3. Broad category totals for themes identified in staff and student responses to questions about what made a recent effective feedback experience effective.

What made feedback effective?	Staff (n)	Staff (%)	Students (n)	Students (%)
Feedback design	170	53%	69	17%
Content of comments	110	34%	335	84%
Source of feedback information	4	1%	24	6%

Feedback design

As discussed earlier, the feedback literature has moved from a focus on providing better information to students (e.g. feedback comments on student work) to also consider designing the tasks and activities in which students engage (e.g. requiring students to use feedback comments from their first assignment in their second assignment). A slight majority of educators mentioned design as what made feedback in their classes effective; however, relatively few students mentioned design at all. The specific features are summarised in Table 4.

Compared with students, a higher proportion of staff thought design was what supported the self-selected effective feedback instance they discussed. This was true for design in general, and for almost all specific features of feedback design. One possible explanation for this is that educators may be more aware of design than students; feedback design can take educators significant time and consideration, whereas students may not notice the design and instead focus on the products of the design (e.g. comments).

Table 4. Elements of feedback designs identified as supporting effective feedback by educators and students.

Description	Staff (n)	Staff (%)	Students (n)	Students (%)
Unspecified design	4	1%	0	0%
Peer feedback	24	7%	2	1%
Simulation	2	1%	1	0%
Exemplars	9	3%	3	1%
Moderation	2	1%	0	0%
Workshop	2	1%	0	0%
Students taking an active role	28	9%	3	1%
Time/sequence, in particular:				
<i>Frequency</i>	7	2%	1	0%
<i>Timeliness</i>				
<i>(Fast/prompt/immediate)</i>	31	10%	4	1%
<i>Timeliness (When it is needed)</i>	8	2%	0	0%
<i>Iterative (e.g. staged tasks to provide iterative feedback)</i>	38	12%	16	4%
<i>Feedback spanning units</i>	1	0%	0	0%
<i>(Non-specific comments about time/sequence)</i>	4	1%	0	0%
Mode of comments was:				
... <i>rubric</i>	13	4%	15	4%
... <i>face to face</i>	30	9%	27	7%
... <i>digital recording</i>	15	5%	10	3%
... <i>automated modes</i>	3	1%	0	0%
... <i>other modes</i>	2	1%	2	1%
<i>(Non-specific comments about mode of comments)</i>	2	1%	1	0%
Formative	9	3%	1	0%

Students are often regarded as wanting more timely feedback (Li and De Luca 2014), and it is common for institutions to require feedback comments be provided to students within a particular timeframe. Prompt turnaround of feedback was mentioned by a very small

number of students, and 10% of educators. However, we would argue that prompt turnaround of feedback is actually a second-order concern; the most important concern for timeliness is that feedback information is available to students in time for them to undertake the next task. Timeliness in the form of feedback information being available when the student needs it was not mentioned by students, and was mentioned by a very small number of staff. We would regard the availability of feedback comments in time to do subsequent work as a fundamental requirement for feedback to occur at all, and the relative scarcity of this theme suggests this view is either not held by many students and educators, or it is perhaps so taken-for-granted that it was not considered worth mentioning.

Another potentially taken for granted feature of feedback is that it needs to be iterative or connected; students need to have tasks structured in such a way that they can demonstrate their improvement from one task to the next (Boud and Molloy 2013). Few educators and fewer students mentioned this as a feature of effective feedback. Where students mentioned this theme, they said feedback was made effective either by repeated attempts at the same task, repeated attempts at similar tasks, tasks split into pieces and interspersed with feedback, or in-class feedback followed by feedback on an improved submission. However, despite being mentioned by relatively few students, several of those students mentioned this as the only feature that made their specific instance of feedback effective. Similarly, for many of the staff who mentioned iterative or connected tasks as a feature of effective feedback in their classes, this was the only theme found in their data.

Some specific feedback design features have gained popularity in feedback literature over recent years; in particular peer feedback, the use of exemplars, and feedback moderation. The near absence of peer feedback is potentially unsurprising, as although we are aware of some use of peer feedback within our contexts, we are also aware of resistance to these approaches from students and educators (Liu and Carless 2006; Tai *et al.* 2016; Adachi *et al.* 2018). The absence of exemplar approaches may be explained by exemplars not being

viewed by educators and students as part of feedback processes; although exemplars are compatible with models like Feedback Mark 2 (Boud and Molloy 2013), they may not fit within everyday educator or student definitions of feedback. We suspect the lack of comments about feedback moderation (the review of educator feedback comments by other educators, as described in Broadbent *et al.* 2018) may be due to this process being largely nonvisible to students, or it being a relatively niche practice.

The design elements most mentioned by students related to modalities – that is, the forms in which feedback information was provided. These comments tended to relate to the perceived affordances of particular modalities: rubrics were noted as ‘accurate’ or ‘detailed’; digital recordings were ‘easy to understand’ or more voluminous; face-to-face feedback was personalised and thorough. The lack of comments from students around automated sources (e.g. formative multiple-choice quizzes) is perhaps surprising. However, this does not imply these sources are ineffective; it merely implies they were not a part of the most effective recent feedback experience for these students (or, potentially, are not considered to be feedback as such).

Within the conceptualisation of feedback adopted in this paper, comments are ‘dangling data’ (per Sadler 1989, p. 121) until they are actively used by students. A small number of educators and a very small number of students directly referred to students taking an active role as what had made feedback effective. For example, one educator said that this aspect of design was what made feedback effective:

Students were given very detailed comments on an essay draft. They were required to produce a final draft, and a reflective piece that explained/justified their response to comments on their draft.

While it may be increasingly accepted that feedback needs to be enacted in order to complete the feedback loop and thus qualify as feedback, the relative scarcity of designs that made students the actors in feedback was somewhat surprising. In addition, although data in this

theme reflected students as active, it did not usually describe agentic, student-driven practices such as feedback-seeking.

Feedback comments

By far the most common top-level theme identified in student responses was that high-quality ‘feedback information’ is part of effective feedback. This aligns with findings from Li and De Luca’s (2014) systematic review that noted some of the features of feedback most desired by students were that it was ‘personal, explicable, criteria-referenced, objective, and applicable to further improvement’ (p. 390). However, we were surprised to see that the quality of feedback information was mentioned by proportionally fewer educators. The specific features of feedback comments noted by educators and students are summarised in Table 5 below.

The most prominent theme in the data about comments is that students found usable comments effective. Given the conceptualisation of feedback adopted in this paper, such a statement may sound fundamental or even tautological. However, given its prevalence, it is worth emphasising that the most common active ingredient in effective feedback from the student perspective was communicating what needs to be improved. While this was usually expressed in terms of improvements to the students’ work or understanding, some students also mentioned that feedback which focused on improvements to learning strategy was also effective.

Table 5. Qualities of comments provided that support effective feedback by educators and students.

Description	Staff (<i>n</i>)	Staff (%)	Students (<i>n</i>)	Students (%)
Usable - in terms of saying what knowledge/skills to focus on	40	12%	194	49%

Usable - in terms of directing learning strategy	8	2%	15	4%
Detailed/specific/thorough	32	10%	81	20%
Clarity/focused/precise/direct	5	2%	31	8%
Nice/positive/constructive	6	2%	37	9%
Supportive/encouraging/motivating	8	2%	27	7%
Personalised	9	3%	26	7%
Individualised	17	5%	24	6%
Generic	11	3%	2	1%
Relating to Standards	7	2%	7	2%
Correct/accurate	1	0%	1	0%
Modelling	5	2%	2	1%
(unspecified)	2	1%	4	1%

The next most prevalent theme for students in terms of the content of comments was that feedback needs to be detailed, specific or thorough. For many students who mentioned detail, it was the sole feature that made their instance of feedback effective. A related, less common theme was that feedback needed to be clear, focused, precise or direct.

Some students mentioned that their feedback experience was made effective by being personalised or individualised. These descriptions proved difficult to analyse as they often used a term like ‘personalised’ without explanation of what the term meant. In exploratory focus groups conducted to clarify some responses from this survey, we asked students (n=28) what the term ‘personalised’ meant to them, and we received the consistent response that students thought feedback was personalised when they felt the assessor had actually read their work and was making comments specifically about it – as opposed to receiving generic feedback information about the cohort’s work. Based on this, we consider the individualised and personalised themes to be perhaps inseparable; however, we report them as distinct codes here because that was what we saw in the survey data as standalone. In contrast, there was

also a small set of students and staff who found generic feedback comments (the opposite of personalised feedback) effective.

A small number of students indicated that their recent effective feedback experience was made effective thanks to broadly affective features of the comments made about their work: the comments were nice, positive or constructive, or supportive, encouraging or motivating. For a substantial minority of students who discussed either of these themes it was the only theme mentioned; however, for most students these themes were mentioned alongside other features.

Based on Li and De Luca's (2014) review, as well as recent work on evaluative judgement (Tai *et al.*, in press), we expected that staff, and to a lesser extent students, would value comments that made reference to standards or criteria. Student participants in other qualitative studies (e.g. Poulos and Mahony 2008) often mentioned criteria as an effective reference point for feedback. To our surprise, very few staff or students in our study mentioned these features, and even when we re-checked the rubric modality subtheme from feedback design, there was little explicit mention of standards or criteria. Sophisticated feedback models like sustainable feedback (Carless *et al.* 2011) or Feedback Mark 2 (Boud and Molloy 2013) are dependent in some part on feedback that makes explicit reference to standards, in order to develop student understanding of those standards; it is concerning that standards were not a feature of effective feedback experiences for many staff and students. Most students mentioned comments that identified how to improve, but few mentioned the reference point for those improvements.

Conclusion

Returning to the research questions for this study, we have found that, broadly speaking, staff and students think the purpose of feedback is improvement. From the staff perspective, feedback was made effective primarily through design concerns like timing, modalities and connected tasks. From the student perspective, feedback was made effective through high-

quality comments which were usable, sufficiently detailed, attended to affect, and appeared to be about the student's own work.

However, we were also very interested to find other, sometimes seemingly incongruous experiences of effective feedback. For example, while many students had effective feedback experiences involving feedback information tailored to them, some others appreciated generic comments. Here, the experiences of staff and students seem to concur with what Sadler (2010) observed from four review studies on feedback:

At the risk of glossing over the complexities of what is known about feedback, the general picture is that the relationship between its form, timing and effectiveness is complex and variable, with no magic formulas. (Sadler 2010, p. 536)

The staff focus on feedback designs and the student focus on feedback comments may reflect the elements of feedback processes that are most readily noticeable to staff and students. In improving feedback, it may be helpful for students to attend to and reflect on the design elements that support their learning. Better understandings of feedback designs are an element of the 'assessment literacy' feedback recipience process that Winstone *et al.* (2017) find to be supportive of more agentic engagement in feedback. In addition, student demand for better feedback designs – rather than just better feedback comments – may support educators who wish to change how they do feedback.

Staff and students are sometimes stereotyped as holding regressive views of feedback, and we were heartened to find that this was not the case with most of our sample. Our participants held what we would regard as relatively positive and sophisticated views of feedback, especially with respect to its purpose. However, we caution that this could be a result of selection bias, with educators and students who think more about feedback potentially more likely to complete a survey on the topic.

However, despite this sophistication there are still several frontier topics in feedback that have not featured in recent effective feedback experiences for our participants. Evaluative judgement, peer feedback, exemplars and feedback moderation are concepts or practices that are regarded as holding merit by researchers (Liu and Carless 2006; Carless and Chan 2016; Broadbent *et al.* 2018; Tai *et al.*, in press), but either weren't noticed, experienced, or prioritised as most effective by our participants.

This study may assist researchers and academic developers in refocusing their efforts. For example, interventions to convince this sample of educators and students that feedback is about improvement rather than justifying a grade may seem patronising. However, interventions to shift students from a focus on the quality of comments towards what they do with those comments may be well received, as although there was a strong focus on the quality of comments, the most commonly identified feature of effective feedback comments was that they were usable. Affective and relational matters did not feature strongly in this study; however, we know from other research that these matters are crucial and impact different bodies of students differently (Telio *et al.* 2015; Ryan and Henderson, in press). It may be worthwhile to target development around affective matters with these educators and students.

This study, as with many others in the field of higher education, asked individuals to report what they think is effective, rather than measuring if particular approaches are successful (Tight 2013). While we agree with the need in general to move towards understanding effects of feedback, we think this needs to be done with reference to a framework of what individuals think feedback is for, and what they experience as effective. In addition, if feedback designs prove as difficult to change as assessment designs, the opinions colleagues express about 'what works' may be much more powerful in influencing feedback practice than published empirical research (Bearman *et al.* 2017).

The analysis in this study was informed by a modern understanding of what feedback is: a process, designed by educators, undertaken by learners, which is necessarily about improvement. If the field of feedback research is to properly adopt this sort of conceptualisation of feedback, there may be a need to re-examine some of the fundamental findings and assumptions of the field within this framework. Although we took an inductive approach, we were unable to ignore key conceptual arguments from recent years; other inductive analyses may similarly yield new insights on the staff and student experience of feedback if conducted within this frame. From a practical perspective, there is also a great need to move institutional and national surveys toward more modern and sophisticated conceptualisations of feedback (Winstone and Pitt 2017).

Despite our modern framing, however, we found that some old-fashioned ideas remain prevalent. For example, students had an overwhelming focus on the content of comments as what had made feedback effective, which at first glance appears to run counter to models like Feedback Mark 2 (Boud and Molloy 2013). However, balanced against this, the most common feature of comments that made them effective from the student perspective was that they were usable.

This study has demonstrated that educators and students may hold more sophisticated views of feedback than they are sometimes credited with. But despite the differences between staff and students around what makes for effective feedback, the starkest differences were between the participants and what we the authors, as feedback researchers, regard as the purpose of feedback and what makes it effective. Students and staff continue to believe the purpose of feedback is largely to ‘provide’ comments with (often vague) notions that it leads to improvement. However, such beliefs overemphasise the idea that we have a clear sense of what quality input (provision of information) looks like. Instead, we argue that feedback should be judged by looking at what students do with information about their work, and how this results in demonstrable improvements to their work and learning strategies. In other

words, effective feedback needs to demonstrate an effect. In doing so we can best judge, and adapt accordingly, the entire feedback system, including the form of comments.

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References

- Adachi, C., J.H.-M. Tai and P. Dawson. 2018. Academics' perceptions of the benefits and challenges of self and peer assessment in higher education. *Assessment & Evaluation in Higher Education* 43, no 2: 294-306.
- Bayerlein, L. 2014. Students' feedback preferences: How do students react to timely and automatically generated assessment feedback? *Assessment & Evaluation in Higher Education* 39, no 8: 916-31.
- Bearman, M., P. Dawson, S. Bennett, M. Hall, E. Molloy, D. Boud and G. Joughin. 2017. How university teachers design assessments: A cross-disciplinary study. *Higher Education* 74, no 1: 49-64.
- Bell, A.R. and C. Brooks. In press. What makes students satisfied? A discussion and analysis of the UK's national student survey. *Journal of Further and Higher Education*.
- Boud, D. and E. Molloy. 2013. Rethinking models of feedback for learning: The challenge of design. *Assessment & Evaluation in Higher Education* 38, no 6: 698-712.
- Braun, V. and V. Clarke. 2006. Using thematic analysis in psychology. *Qualitative Research in Psychology* 3, no 2: 77-101.
- Broadbent, J., E. Panadero and D. Boud. 2018. Implementing summative assessment with a formative flavour: A case study in a large class. *Assessment & Evaluation in Higher Education* 43, no 2: 307-22.
- Carless, D. 2006. Differing perceptions in the feedback process. *Studies in Higher Education* 31, no 2: 219-33.
- Carless, D. (2015). *Excellence in University Assessment: Learning from Award-winning Practice*. London: Routledge.
- Carless, D. and K.K.H. Chan. 2016. Managing dialogic use of exemplars. *Assessment & Evaluation in Higher Education* 42, no 6: 930-941.
- Carless, D., D. Salter, M. Yang and J. Lam. 2011. Developing sustainable feedback practices. *Studies in Higher Education* 36, no 4: 395-407.
- Carroll, D. 2014. *Graduate course experience 2013: A report on the course experience perceptions of recent graduates*. Melbourne: Graduate Careers Australia.
- Cookson, C.J. In press. Assessment terms half a century in the making and unmaking: From conceptual ingenuity to definitional anarchy. *Assessment & Evaluation in Higher Education*.
- Dowden, T., S. Pittaway, H. Yost and R. McCarthy. 2013. Students' perceptions of written feedback in teacher education: Ideally feedback is a continuing two-way

- communication that encourages progress. *Assessment & Evaluation in Higher Education* 38, no 3: 349-62.
- Hattie, J. and H. Timperley. 2007. The power of feedback. *Review of Educational Research* 77, no 1: 81-112.
- Higher Education Funding Council for England. 2014. *UK review of the provision of information about higher education: National student survey results and trends analysis 2005-2013*: HEFCE.
- LaDonna, K.A., T. Taylor and L. Lingard. 2018. Why open-ended survey questions are unlikely to support rigorous qualitative insights. *Academic Medicine* 93, no 3: 347-349.
- Li, J. and R. De Luca. 2014. Review of assessment feedback. *Studies in Higher Education* 39, no 2: 378-93.
- Liu, N.-F. and D. Carless. 2006. Peer feedback: The learning element of peer assessment. *Teaching in Higher Education* 11, no 3: 279-90.
- Maxwell, J. 2012. What is realism, and why should qualitative researchers care? *A Realist Approach for Qualitative Research*. Thousand Oaks, California: Sage.
- Molloy, E. and D. Boud. 2013. Changing conceptions of feedback. In *Feedback in higher and professional education: Understanding it and doing it well*, eds D. Boud and E. Molloy, 11-33. London: Routledge.
- Mulliner, E. and M. Tucker. 2017. Feedback on feedback practice: Perceptions of students and academics. *Assessment & Evaluation in Higher Education* 42, no 2: 266-88.
- Orrell, J. 2006. Feedback on learning achievement: Rhetoric and reality. *Teaching in Higher Education* 11, no 4: 441-56.
- Orsmond, P. and S. Merry. 2011. Feedback alignment: Effective and ineffective links between tutors' and students' understanding of coursework feedback. *Assessment & Evaluation in Higher Education* 36, no 2: 125-36.
- Pitt, E. and L. Norton. 2017. 'Now that's the feedback I want!' Students' reactions to feedback on graded work and what they do with it. *Assessment & Evaluation in Higher Education* 42, no 4: 499-516.
- Poulos, A. and M.J. Mahony. 2008. Effectiveness of feedback: The students' perspective. *Assessment & Evaluation in Higher Education* 33, no 2: 143-54.
- Robinson, S., D. Pope and L. Holyoak. 2013. Can we meet their expectations? Experiences and perceptions of feedback in first year undergraduate students. *Assessment & Evaluation in Higher Education* 38, no 3: 260-72.

- Ryan, T. and M. Henderson. In press. Feeling feedback: Students' emotional responses to educator feedback. *Assessment & Evaluation in Higher Education*.
- Sadler, D.R. 1989. Formative assessment and the design of instructional systems. *Instructional Science* 18, no 2: 119-44.
- Sadler, D.R. 2010. Beyond feedback: Developing student capability in complex appraisal. *Assessment & Evaluation in Higher Education* 35, no 5: 535-50.
- Sanchez, H.S. and K. Dunworth. 2015. Issues and agency: Postgraduate student and tutor experiences with written feedback. *Assessment & Evaluation in Higher Education* 40, no 3: 456-70.
- Shute, V.J. 2008. Focus on formative feedback. *Review of Educational Research* 78, no 1: 153-89.
- Tai, J., R. Ajjawi, D. Boud, P. Dawson and E. Panadero. In press. Developing evaluative judgement: Enabling students to make decisions about the quality of work. *Higher Education*.
- Tai, J.H.-M., B.J. Canny, T.P. Haines and E.K. Molloy. 2016. The role of peer-assisted learning in building evaluative judgement: Opportunities in clinical medical education. *Advances in Health Sciences Education* 21, no 3: 659-76.
- Telio, S., R. Ajjawi and G. Regehr. 2015. The "educational alliance" as a framework for reconceptualizing feedback in medical education. *Academic Medicine: Journal of the Association of American Medical Colleges* 90, no 5: 609-614.
- Tight, M. 2013. Discipline and methodology in higher education research. *Higher Education Research & Development* 32, no 1: 136-51.
- Varpio, L., R. Ajjawi, L.V. Monrouxe, B.C. O'Brien and C.E. Rees. 2017. Shedding the cobra effect: Problematizing thematic emergence, triangulation, saturation and member checking. *Medical Education* 51, no 1: 40-50.
- Winstone, N.E. and E. Pitt. 2017. Feedback is a two-way street. So why does the NSS only look one way? *Times Higher Education*, September 14.
- Winstone, N.E., R.A. Nash, M. Parker and J. Rowntree. 2017. Supporting learners' agentic engagement with feedback: A systematic review and a taxonomy of reciprocity processes. *Educational Psychologist* 52, no 1: 17-37.