RUNNING HEAD: Necessities and luxuries in feedback

What do students want most from written feedback information? Distinguishing necessities from luxuries using a budgeting methodology

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Abstract

Feedback is a key concern for higher education practitioners, yet there is little evidence concerning the aspects of assessment feedback information that higher education students prioritise when their lecturers' time and resources are stretched. One recent study found that in such circumstances, students actually perceive feedback information itself as a luxury rather than a necessity. We first re-examined that finding by asking undergraduates to 'purchase' characteristics to create the ideal lecturer, using budgets of differing sizes to distinguish necessities from luxuries. Contrary to the earlier research, students in fact considered good feedback information the single biggest necessity for lecturers to demonstrate. In a second study we used the same method to examine the characteristics of feedback information that students value most. Here, the most important perceived necessity was guidance on improvement of skills. In both studies, students' priorities were influenced by their individual approaches to learning. These findings permit a more pragmatic approach to building student satisfaction in spite of growing expectations and demands.

Keywords: feedback; approaches to learning; student preferences; teacher characteristics

Global changes in the marketisation of higher education have shifted the role of students, from scholars to consumers (Woodall, Hiller, and Resnick 2014). In countries like England, this shift stems partly from the increased financial burden of attending university, leading to greater emphasis on 'value for money' (Rolfe 2002). The delivery of higher education has also evolved in recent years. In particular, the increasing modularisation of curricula has led to students more commonly being assessed via multiple pieces of unrelated coursework (Hughes, Smith, and Creese, in press), and receiving feedback inputs from multiple members of staff. Issues surrounding assessment and feedback have therefore risen quickly up the quality enhancement agenda (Nicol, Thomson, and Breslin 2014), driven further by growing appreciation of the importance of feedback for learning (e.g., Black and Wiliam 1998). Nevertheless, increased student demands and expectations with regard to feedback are in competition with increasing pressure on resources and academics' time (Vostal 2015). These constraints lead us to question which feedback characteristics are prioritised by students, as this would provide insight into how they use the feedback inputs they receive (Evans 2013). In this paper, we explore the qualities that students perceive as necessities and luxuries in written feedback inputs, and how their approaches to learning influence these priorities. We also revisit a recent and surprising finding, which indicated that students perceive good feedback itself as a luxury, rather than a necessity (Senko, Belmonte, and Yakhkind 2012).

The importance of good-quality feedback information has long been discussed in the education and educational psychology literatures (e.g., Black and Wiliam 1998; Hattie 1987). However, the word 'feedback' can have many meanings, which can differ between students and teachers (Adcroft 2011; Boud and Molloy 2013). Conflicting conceptions of feedback are important because they can prevent a shared understanding about what feedback is for, where it comes from, and what should be done with it (Boud and Molloy 2013). Throughout this

paper we use the term ‘feedback’ to mean “information that helps students trouble-shoot their own performance and self-correct” (Nicol and Macfarlane-Dick 2006, 208). However, we also use this term in a narrow sense insofar that we refer only to (a) information received from teachers, rather than from peers for example, or from internal cognitive processes; and (b) the information input itself, rather than what students actually do with it. The latter point is important because many have argued that information needs to be acted upon to qualify as ‘feedback’. Nevertheless, we adopted this narrow definition here because we were primarily interested in students’ beliefs about the feedback information itself.

Along a student’s educational journey, receiving feedback information represents a crucial component of their engagement with learning, a source of dialogue, and a vehicle for individual development (Hyland and Hyland 2001). Yet assessment and feedback are commonly the areas of higher education about which students are least satisfied (Higher Education Funding Council for England 2013; James, Krause, and Jennings 2010). There is a large literature exploring the types of feedback information that best support learning (e.g., Gibbs and Simpson 2004; Nicol and Macfarlane-Dick 2006), and how shaping feedback practices could increase students’ overall satisfaction (Nicol 2010). However, equally important is to understand students’ preferences for the feedback information they receive. Exploring students’ preferences for different aspects of their learning environments is a well-established endeavour, and in particular many researchers have examined the teacher characteristics that students desire (Goldstein and Benassi 2006; Hill, Lomas, and MacGregor 2003; Senko, Belmonte, and Yakhkind 2012; Voss and Gruber 2006). Research using various methods has shown that students commonly believe good teachers are clear, organised, well-prepared, and interesting (Feldman 1989, 1997). Indeed, students of all abilities consider teachers’ clarity of explanation as fundamental (Omar et al. 2014), as are their knowledge and enthusiasm (Hill, Lomas, and MacGregor 2003; Voss and Gruber 2006). In contrast with this

evidence-base, though, there is much less evidence regarding students' assessment preferences, and even less on their feedback preferences (Birenbaum 2007; Rowe and Wood 2008).

The issue of shaping feedback practices to align with students' preferences is contentious. Students are often characterised as engaging inadequately with feedback information (e.g., Carless 2006; Rae and Cochrane 2008); as, for instance, in reports that describe students failing to even collect written feedback (Sinclair and Cleland 2007). However, researchers such as Higgins, Hartley, and Skelton (2002) counter that students are 'conscientious consumers' who engage eagerly with feedback information. How much consideration should educators give to students' preferences, given that "students are not always in the best position to judge what is educationally preferable" (Huxham 2007, 609)? Certainly, for better or worse, considering student preferences aligns with the current service-driven orientation in higher education (Birenbaum 2007). But students' perspectives might be informative for at least two other reasons. First, although as educators our students might not share our own perceptions of 'good' teaching and feedback (Reid and Johnston 1999), a shared vision can nevertheless be beneficial. Indeed, when students' perceptions about excellent teaching align with those of their lecturers, the students formally evaluate those lecturers' teaching more positively (Goldstein and Benassi 2006). Second, research suggests that it is students' perceptions of their learning environment, rather than the absolute characteristics, that most strongly shape learning (Entwistle 1991; Struyven, Dochy, and Janssens 2005). In short, the feedback information we believe should help students is more likely to actually help if the students share the same views.

So, what feedback information do students most need and want? Truly effective feedback—according to numerous studies—is prompt, personal, identifies strengths and weaknesses, suggests ways to improve, is encouraging and motivating, and perhaps most

importantly, promotes self-regulation (e.g., Hattie and Timperley 2007, Parikh, McReelis, and Hodges 2001). To an extent, students' perceptions mirror this evidence. Ferguson (2011) surveyed Education students, who preferred feedback information that provided guidance on how to improve, encouragement for things done well, and a clear justification for the mark with reference to assessment criteria. These themes echo the broader literature: students prefer feedback information that is positive (Thorpe 2000; Weaver 2006), focuses on improvement (Thorpe 2000; Weaver 2006), and is personally-relevant rather than generic (Brown 2007; Thorpe 2000). In contrast, feedback on grammar, spelling, and referencing are often seen as less important (Ferguson 2011). Interestingly, students' responses in Ferguson's study indicated that they might distinguish essential aspects of feedback information from 'luxuries'. For example one student remarked "if time constraints [on the marker] are an issue I would much prefer comment on the core of the paper rather than the detail" (2011, 56).

In sum, research provides many ideas of 'what students most want' from written feedback inputs. Yet whereas a variety of methods (e.g., surveys, questionnaires, focus groups) have been applied to this end, these methods rarely offer a sense of the relative importance of different characteristics. When asked which characteristics of a teacher or of feedback are important, students in these studies are typically unconstrained in the demands they can list, and these desires are by no means few (e.g., Omar et al. 2014). In understanding which aspects of feedback information students see as necessities and luxuries, a promising method is Li et al.'s (2002) microeconomic budgeting method, applied by Senko, Belmonte, and Yakhkind (2012) to teacher characteristics. In Senko, Belmonte, and Yakhkind's (2012) 'Build-a-Professor' task, participants received different budgets with which to 'purchase' characteristics to create an ideal professor. Participants' spending patterns permitted the authors to distinguish necessities—qualities reliably bought even when resources were limited—from luxuries, which tended only to be bought in more copious budgets. Their

findings revealed that being enthusiastic/entertaining was the most important quality for the American students sampled. A professor's topic expertise, clarity about how to succeed, and clear presentation style were also considered necessities. In contrast, an interactive teaching style and warm/compassionate personality were considered luxuries, and surprisingly, so too was good feedback. A key objective of the present research was to apply this budgeting methodology to better understand what students most want from feedback inputs.

Students' approaches to learning

Identifying students' preferences is limited in application without considering learner diversity. This consideration helps us to appreciate why some students benefit more than others from certain methods, but also to understand the criteria against which students evaluate teachers' performance (McCann and Gardner 2014). The latter is particularly important given the increasing impact of student evaluations on teachers' formal appraisal. From a theoretical perspective, Biggs' (1989) '3P' model characterises the learning process as an interaction between Presage (learning environment and student characteristics), Process (approaches to learning) and Product (learning outcomes). Here, we were particularly interested in the second of these factors: students' approaches to learning.

As a construct, students' approach to learning assesses the strategies that students adopt when studying, and what motivates them to learn (Biggs, Kember, and Leung 2001). Students with a deep orientation typically have high intrinsic motivation to further their understanding, and tend to focus on underlying meaning and themes, whereas students with a surface orientation study to achieve the minimum requirements and use low-level strategies such as rote learning and memorisation (Biggs 1999). Students' approaches to learning do not constitute rigid 'academic personalities', though: individual students can adopt a surface or deep approach depending on the learning environment (Marton and Säljö 1976). A deep

approach is generally considered to be most favourable; there are many empirical demonstrations of academic achievement relating positively with a deep approach (e.g., Chamorro-Premuzic and Furnham 2008), and negatively with a surface approach (e.g., Diseth 2003). However, characterising deep approaches as advantageous and surface approaches as disadvantageous is rather simplistic (Heikkilä et al. 2011). Further research has therefore differentiated the motives for adopting a particular approach from the strategies employed (Kember, Biggs, and Leung 2004). Motives for adopting a deep approach include intrinsic interest and commitment to work, whereas deep strategies include relating ideas and understanding. Motives for adopting a surface approach include fear of failure and the aim for a qualification, whereas surface strategies include memorisation and minimising the scope of study. When deep and surface approaches are broken down in this way, their relationships with academic achievement emerge as more complex. Typically, academic achievement correlates positively with both deep and surface strategies (Rosander and Bäckström 2012). Thus, even surface strategies can be appropriate for achieving certain learning outcomes (Entwistle, Tait, and McCune 2000).

As well as predicting academic success, there is also evidence that students' approaches to learning influence preferences for various aspects of learning environments. As Entwistle and Tait (1990) argued, these study orientations are likely to shape students' definitions of effective teaching. According to Crawford et al. (1998), students' preferences for good teaching, clear learning goals, and independence are all related to a deep approach to learning, whereas concerns about inappropriate assessment and workload are related to a surface approach. Furthermore, Chamorro-Premuzic, Furnham, and Lewis (2007) showed that a preference for interactive teaching methods was predicted by deep approach. Other research suggests that approaches to learning might relate to students' preferences in the domain of feedback. Rowe and Wood (2008) uncovered two 'preference dimensions' in

students' perceptions of feedback information. Preference A, which the authors liken to a deep approach, reflects a desire for information that encourages independent thinking, and that requires students to reach their own conclusions. Conversely, Preference B—akin to a surface approach—reflects a preference for information that provides answers and is positive in tone. Evans (2013) describes students' approaches to learning as an important mediator between receiving and acting upon feedback inputs. Indeed, one relevant individual difference in Senko, Belmonte, and Yakhkind's (2012) study was that students who put greater emphasis on performance goals (i.e., on outperforming their peers, as opposed to mastering the subject) tended to perceive 'good feedback' as less of a necessity.

The present research

We applied the budgeting paradigm to explore student preferences concerning feedback inputs, in two ways. First, in Study 1 we conducted a conceptual replication of Senko, Belmonte, and Yakhkind's (2012) study on students' appraisal of lecturers' ideal qualities. Here, we were especially interested to re-examine those authors' surprising finding that students considered good feedback a luxury rather than necessity. We also explored the extent to which students' valuing of good feedback hinges on students' approaches to learning. Second, in Study 2 we applied the budgeting method again, this time to explore students' appraisals of the qualities that constitute good feedback inputs.

Study 1

Method

Participants

A total of 73 undergraduates (25 males, 48 females; Mean age= 21.34, *SD*= 1.06, Range= 18-25) responded to an advertisement and participated without compensation. Whereas a

sizeable proportion (43.8%) were Psychology students, the remainder represented various other degree subjects. Most respondents (89.0%) were in their final year of study. Despite the diversity of disciplines, all participants were enrolled in modularised degree programmes, wherein they completed at least two formal assessments for each module, at least one of which was summative. They were accustomed to receiving at least one written feedback input from their lecturer prior to their final summative assessment, which would refer to standardised grade descriptors. The depth and focus of this feedback information would undoubtedly differ across disciplines.

Materials

Budgeting task. Following Senko, Belmonte, and Yakhkind (2012), we used the budgeting methodology to establish the importance placed on different lecturer qualities. The method involves participants distributing fictional budgets among various qualities that they could 'purchase'. In small budgets, participants are forced to choose which qualities are most necessary; as the budget increases, participants can buy more of the qualities they consider luxuries. An overriding advantage of this method is that it forces trade-offs; that is, unlike basic scale measures, this method prevents participants from simply rating every quality as important.

In Senko, Belmonte, and Yakhkind's (2012) study, participants judged the relative importance of nine teacher qualities: 'enthusiastic/entertaining', 'intellectually challenging', 'topic expertise', 'clear about how to succeed', 'clear presentation style', 'reasonable workload', 'interactive teaching style', 'warm/compassionate personality', and 'good feedback'. We used the same qualities with two modifications. First, we split 'enthusiastic/entertaining' into two distinct qualities: 'enthusiastic' and 'entertaining'. Second, we removed the 'reasonable workload' quality, because compared to the US context

from which Senko et al.'s students were drawn, students' presumed workload in many UK universities (including our own) is less directly controlled by individual lecturers. Rather, this presumed workload is typically standardised according to the 'credits' a module is worth, and teaching staff often have shared (albeit often implicit) understandings about how these workloads should be operationalised. The nine qualities were presented in a fixed order, with 'good feedback' positioned second.

Measures. To assess students' approaches to learning we used Biggs, Kember, and Leung's (2001) Revised two-factor Study Process Questionnaire (R-SPQ-2F). This measure includes 20 statements such as "My aim is to pass my course whilst doing as little work as possible", for which participants indicate agreement on 5-point scales (1= Never true of me; 5= Always true of me). As outcome measures, participants receive overall scores indexing their deep and surface approaches, as well as motive and strategy subscale scores for each. The measure is widely used and possesses good internal consistency (Deep approach α= .73; Surface approach α= .64; Deep Motive α= .62; Deep Strategy α= .63; Surface Motive α= .72; Surface Strategy α= .57; Biggs, Kember, and Leung 2001).

Procedure

Participants were tested individually in a small laboratory. After consenting to take part, participants received a questionnaire pack, within which they noted their age and gender. Next, participants read that they had a (fictional) budget of £20, which they should distribute entirely among nine lecturer qualities to create the 'ideal' lecturer. They could choose to distribute the budget across all nine qualities, or invest in a subset of qualities. The budget could be allocated in units of £1, and participants were provided with a calculator. After completing the task with the £20 budget, participants repeated it with a £40 budget, and

then a £60 budget. After completing the task with all three budgets, participants completed the R-SPQ-2F questionnaire. Finally, they were thanked and debriefed.

Results and Discussion

Data preparation

Adopting the same analytic approach as Senko, Belmonte, and Yakhkind (2012), we calculated two dependent measures. First, we calculated the percentages of the money assigned by each participant to each of the nine lecturer qualities within the £20 budget; this we refer to as the *necessity budget.* Second, we calculated the *luxury budget* assignations by subtracting the amount awarded in the £40 budget from the amount awarded in the £60 budget, and converting the result to a percentage. Put differently, the necessity budget represents the proportion of the first £20 allocated to each quality, whereas the luxury budget represents the proportion of the final £20 allocated. These data are reported in Table 1.

[TABLE 1 ABOUT HERE]

Budgeting analysis

We began by exploring participants' assignations of the necessity budget. We conducted a repeated-measures univariate ANOVA with lecturer quality as the independent variable, and proportion of the budget spent as the dependent variable. This test revealed significant differences between the qualities, $F(6.14, 442.13)= 10.52$, $p< .001$, $\eta^2_p= .13$. The biggest 'necessities' were, in decreasing order of importance, good feedback, clear presentation style, and topic expertise. These results contrast strikingly with those of Senko, Belmonte, and Yakhkind (2012) as far as feedback is concerned: whereas for their participants good feedback was a clear luxury, for our students it was the single biggest necessity. We discuss this finding later. The other necessities echo previous findings

regarding characteristics that students desire in their teachers (Feldman 1989, 1997; Omar et al. 2014; Voss and Gruber 2006).

Moving to the luxury budget, a repeated-measures ANOVA revealed no differences between the lecturer qualities, $F(6.23, 448.44)= 1.17$, $p= .32$, $\eta^2_p= .02$. That is, participants distributed their final £20 roughly equally between all nine qualities. According to the prior research using this method, a quality's status as a 'luxury' is indexed by a significant increase in the proportion of spending between the necessity and luxury budgets. We conducted paired *t*-tests for each quality and found just one 'luxury' by this standard: being intellectually challenging (see rightmost column of Table 1). The three qualities assigned most in the necessity budget were all assigned significantly smaller proportions of the luxury budget.

Correlational analyses

We were interested in whether participants' decisions about lecturer 'necessities'—especially good feedback—might relate to their approaches to learning (see Table 2 for scale reliabilities and intercorrelations). To address this question we calculated the correlations between (a) spending in the necessity budget on each quality, and (b) participants' R-SPQ-2F scores (Table 3). Taking overall scores first, there were no substantial correlations between Deep or Surface approaches and students' prioritising of good feedback. However, participants with higher deep approach scores placed greater necessity on lecturers' topic expertise and being intellectually challenging. In contrast, those with higher surface approach scores placed less necessity on lecturers' topic expertise, and greater necessity on their enthusiasm.

[TABLE 2 ABOUT HERE]

In terms of the subscale scores, again no R-SPQ-2F subscale correlated significantly with students' valuing of good feedback; rather, this most-important quality was valued consistently among our sample. With regard to the remaining qualities, examination of the subscale scores gives a more nuanced account of the overall relationships. The importance placed on intellectually challenging teaching by students with higher deep approach scores was attributable to both deep motives and deep strategies. However, the preference for lecturers' topic expertise among students scoring high on deep approach was best explained by their motives for adopting this approach, rather than the strategies adopted. Two characteristics that were not related significantly to either overall learning approach nonetheless related significantly to one of the subscales. Specifically, deep motive scores were negatively related to preferences for being clear how to succeed, whereas deep strategy scores were negatively related to the importance placed on lecturers being entertaining.

[TABLE 3 ABOUT HERE]

Study 2

The data from Study 1—in contrast with those of Senko, Belmonte, and Yakhkind (2012)—characterise the provision of good feedback information as the foremost quality students desire from lecturers. As discussed above, lecturers invest considerable effort into providing effective feedback, yet there are limits on the time and resources available to this end. It is therefore insufficient to know the extent to which students value feedback inputs; a further crucial question is which characteristics of feedback information do they value most? We again applied Li et al.'s (2002) budgeting method to this question, concurrently exploring individual differences in students' approaches to learning.

Method

Participants

A total of 93 Psychology undergraduates (14 males, 79 females; Mean age= 20.13, *SD*= 2.70, Range= 18-38) participated either for course credit or without compensation. In total, 54.8% were first-years, 34.4% were second-years, and 10.8% were final-years or undertaking a professional training year. The sample was drawn from the same educational context as in Study 1.

Materials

There were two main differences from Study 1. First, participants this time purchased qualities to create not the ideal lecturer, but the ideal written feedback input. To this end we generated 10 feedback information qualities (see leftmost column of Table 4), informed by key papers on this topic (e.g., Ferguson 2011; Higgins, Hartley, and Skelton 2002; Pitts 2005; Rowe and Wood 2008; Weaver 2006). To anticipate diversity in students' preferences, and indeed to reflect the diversity of real-life feedback inputs, some of these qualities had a self-regulatory focus whereas others did not. Second, we conducted this study online. Doing so enabled us to present the feedback information qualities in random orders within the three budgeting tasks (though the £20, £40, and £60 budgets were always completed in that order). It also meant that the software kept track of spending, and participants therefore were not offered calculators.

Procedure

Participants accessed the study via a web-link, where they received information and consented to take part. All instructions were provided on-screen, and participants indicated their age and gender before completing the budgeting tasks, and then the R-SPQ-2F. Finally, participants received debriefing information and the researchers' contact details.

Results and Discussion

As in Study 1 we calculated the proportion of money spent on each quality in the necessity (£20) and the luxury (£60 minus £40) budgets (see Table 4). In the former, there were significant differences between qualities in terms of the money spent, $F(7.66, 704.99) = 38.02$, $p < .001$, $\eta^2_p = .29$. By a large margin, 'Highlights the skills I need to improve for future assignments' was considered more necessary than any other quality ($p < .001$ for all Bonferroni-corrected contrasts).

[TABLE 4 ABOUT HERE]

In the luxury budget there were again significant differences between qualities, $F(6.55, 602.46) = 5.49$, $p < .001$, $\eta^2_p = .06$. The quality that attracted most spending in this budget was commentary on writing style and how to improve it. As the rightmost column of Table 4 shows, comparing the two budgets with paired *t*-tests revealed two clear 'luxuries' assigned significantly more of the final £20 than of the first £20 – these were 'Corrects grammatical errors/advises me how to improve my grammar' and 'Comments on my understanding of the topic'. The amount of the luxury budget spent on the key necessity—guidance about skill improvement—was significantly lower than in the necessity budget.

Correlational analyses

Finally, we looked at participants' R-SPQ-2F data (see Table 5 for scale reliabilities and intercorrelations), to examine whether participants' judgments of 'necessities' related to their approaches to learning (see Table 6). We unexpectedly found that participants who identified more greatly with a deep approach placed *less* necessity on highlighting the skills for improvement; at the subscale level this relationship held for both deep motive and deep strategy. Students scoring highly on deep approach also placed less necessity on comments regarding their understanding, a relationship that seems primarily driven by the strategy subscale. We discuss these surprising findings shortly.

[TABLE 5 ABOUT HERE]

There were no spending patterns significantly associated with an overall surface approach to learning, but students scoring high on the surface motive subscale placed less importance on their grade being linked to grade descriptors. One might interpret this finding as evidence that students driven to study by surface motives are more interested in the grade itself than in its justification.

[TABLE 6 ABOUT HERE]

General Discussion

The objectives of the present research were threefold. Our first objective was to re-examine Senko, Belmonte, and Yakhkind's (2012) findings—wherein students perceived good feedback information as a luxury, rather than a necessity. The second objective was to explore the characteristics of written feedback information that students view as necessities and luxuries. Finally, in both cases we examined the role of students' approaches to learning. Overall, our data provide insights into students' priorities.

In contrast to Senko, Belmonte, and Yakhkind (2012), students in Study 1 perceived the provision of good feedback information as the single biggest necessity in lecturers, and this result held irrespective of students' approaches to learning. These values bolster the prominence of feedback on the higher education quality enhancement agenda (Evans 2013), but what might explain the contrasting findings? Given that most participants in both our research and Senko's were Psychology students, disciplinary context is unlikely to be the reason. However, differences between the US and UK higher education contexts may be one contributing factor. For example, in the US it is more common than in the UK for students to be assessed by and receive feedback from teaching assistants, rather than professors

themselves. It might then be that UK and US students both see good feedback information as highly important, but differ in the extent to which they depend on receiving it from academic staff.

The results of Study 2 were clear in revealing what students see as most important in their feedback inputs: namely, guidance on the skills they should focus on improving. This finding links well with the prior literature (e.g., Poulos and Mahony 2008) and also supports ongoing advancements in pedagogic best-practice, from providing feedback toward providing 'feed-forward' (Evans 2013). Nevertheless, not all students in Study 2 placed equal value on this key quality: in fact, students who scored highly on the deep learning dimension were *less* likely to perceive guidance on skill improvement as a necessity. This unexpected finding is somewhat counterintuitive at first glance. Most of the correlations in our student approaches to learning data were modest and should therefore be interpreted with some caution; nevertheless, perhaps it is the case that students with a deep approach perceive less long-term benefit from directive advice (such as on understanding or skills), instead of working it out themselves. Indeed, a desire to work out the answers is characteristic of Rowe and Wood's (2008) 'Preference A'—which those authors aligned with a deep approach. A fascinating implication is that students' approaches to engaging with feedback might not necessarily mirror their approaches to learning: a student who craves understanding is not always somebody who wants feedback on their understanding, and vice versa. There is much scope for further exploration of this discrepancy.

Our respondents identified two luxuries that they desire from feedback inputs, but not as foremost priorities; these were comments on grammar, and comments on their topic understanding. One might perhaps expect that students would consider comments on their understanding a necessity rather than a luxury. Yet this result might be a consequence of increasingly modularised curricula, wherein comments on skill development are more

‘transferable’ to subsequent work than are comments on the specific topic, which might not be revisited (Higgins, Hartley, and Skelton 2002). Issues surrounding modularisation are discussed frequently in the context of teaching, where it is described as leading to ‘fragmentation’ of topic coverage and disjointed thinking (O’Neill, Donnelly and Fitzmaurice, 2014). The effects of modularisation on feedback inputs must also not be ignored; clearly there is a need to ensure that individual inputs converge to inform students’ academic literacy.

It is important to recognise that the present data come from self-selected samples of UK-based volunteers, primarily Psychology students. Students from different demographic and disciplinary backgrounds will almost certainly vary in their priorities, and so what becomes most theoretically valuable is to understand the factors that underpin these variations. Our data showed that students—irrespective of approaches to learning—put great weight on feedback inputs, yet approaches to learning did explain some systematic variations in the kinds of feedback information they desired. It would be interesting to use the budgeting methodology to contrast students’ beliefs about what feedback information they want, with their beliefs about what feedback information will actually benefit them. Huxham (2007) indicates that these two would differ, but a direct comparison of budgeting could serve to directly test some possible explanations for this discrepancy. Indeed, it is worth noting that students’ “espoused theories” about the feedback information they desire might not always reflect their “theories-in-use,” which dictate their satisfaction when they actually receive such information. This latter issue, we expect, would be difficult to untangle using the budgeting method, but nevertheless has implications for the meanings we attach to students’ stated preferences.

Taken together, these data develop our understanding of what different kinds of students want from feedback inputs. This understanding is important if we are to develop

strategies to align teaching and learning with the ongoing shifts in higher education provision, and to understand how different students receive and use feedback information. What students say they want in principle is not always what they want in practice, nor what will benefit them. Nevertheless, student preferences are an important source of information for stimulating dialogues and practices that maintain satisfaction in higher education.

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References

Adcroft, A. 2011. "The mythology of feedback." *Higher Education Research & Development*, 30 (4): 405-419. doi: 10.1080/07294360.2010.526096.

Biggs, J. B. 1989. "Approaches To The Enhancement Of Tertiary Teaching." *Higher Education Research & Development* 8 (1): 7-25. doi:10.1080/0729436890080102.

Biggs, J. B. 1999. *Teaching For Quality Learning At University*. Buckingham, United Kingdom: Open University Press.

Biggs, J. B., D. Kember, and D.Y. P. Leung. 2001. "The Revised Two-Factor Study Process Questionnaire: R-SPQ-2F." *British Journal of Educational Psychology* 71 (1): 133-149. doi:10.1348/000709901158433.

Birenbaum, M. 2007. "Assessment And Instruction Preferences And Their Relationship With Test Anxiety And Learning Strategies." *Higher Education* 53 (6): 749-768. doi:10.1007/s10734-005-4843-4.

Black, P., and D. Wiliam. 1998. "Assessment And Classroom Learning." *Assessment In Education: Principles, Policy & Practice* 5 (1): 7-74. doi:10.1080/0969595980050102.

Boud, D., and E. Molloy. 2013. *Feedback in Higher and Professional Education*. London: Routledge.

Brown, J. 2007. "Feedback: The Student Perspective." *Research in Post-Compulsory Education* 12 (1): 33-51. doi:10.1080/13596740601155363.

Carless, D. 2006. "Differing Perceptions In The Feedback Process." *Studies in Higher Education* 31 (2): 219-233. doi:10.1080/03075070600572132.

Chamorro-Premuzic, T., and A. Furnham. 2008. “Personality, Intelligence And Approaches To Learning As Predictors Of Academic Performance.” *Personality and Individual Differences* 44 (7): 1596-1603. doi:10.1016/j.paid.2008.01.003.

Chamorro-Premuzic, T., A. Furnham, and M. Lewis. 2007. “Personality And Approaches To Learning Predict Preference For Different Teaching Methods.” *Learning and Individual Differences* 17 (3): 241-250. doi:10.1016/j.lindif.2006.12.001.

Crawford, K., S. Gordon, J. Nicholas, and M. Prosser. 1998. “Qualitatively Different Experiences Of Learning Mathematics At University.” *Learning and Instruction* 8 (5): 455-468. doi:10.1016/s0959-4752(98)00005-x.

Diseth, Å. 2003. “Personality And Approaches To Learning As Predictors Of Academic Achievement.” *European Journal of Personality* 17 (2): 143-155. doi:10.1002/per.469.

Entwistle, N. J. 1991. “Approaches To Learning And Perceptions Of The Learning Environment.” *Higher Education* 22 (3): 201-204. doi:10.1007/bf00132287.

Entwistle, N. J., and H. Tait. 1990. “Approaches To Learning, Evaluations Of Teaching, And Preferences For Contrasting Academic Environments.” *Higher Education* 19 (2): 169-194. doi:10.1007/bf00137106.

Entwistle, N. J., H. Tait, and V. McCune. 2000. “Patterns Of Response To An Approaches To Studying Inventory Across Contrasting Groups And Contexts.” *European Journal of Psychology Of Education* 15 (1): 33-48. doi:10.1007/bf03173165.

Evans, C. 2013. “Making Sense Of Assessment Feedback In Higher Education.” *Review of Educational Research* 83 (1): 70-120. doi:10.3102/0034654312474350.

Feldman, K. A. 1989. “The Association Between Student Ratings Of Specific Instructional Dimensions And Student Achievement: Refining And Extending The Synthesis Of Data From Multisection Validity Studies.” *Research in Higher Education,* 30 (6): 583-645. doi:10.1007/bf00992392.

Feldman, K. A. 1997. “Identifying Exemplary Teachers And Effective Teaching In Higher Education: Research And Practice.” In *Effective Teaching in Higher Education: Research And Practice*, edited by Raymond P. Perry and John C. Smart, 368-395. New York: Agathon Press.

Ferguson, P. 2011. “Student Perceptions Of Quality Feedback In Teacher Education.” *Assessment & Evaluation in Higher Education* 36 (1): 51-62. doi:10.1080/02602930903197883.

Gibbs, G., and C. Simpson. 2004. “Conditions Under Which Assessment Supports Students’ Learning.” *Learning and Teaching in Higher Education* 1: 3-31.

Goldstein, G. S., and V. A. Benassi. 2006. “Students’ and instructors’ beliefs about excellent lecturers and discussion leaders.” *Research in Higher Education* 47 (6): 685-707. doi: 10.1007/s11162-006-9011-x.

Hattie, J. A. 1987. “Identifying the salient facets of a model of student learning: A synthesis of meta-analyses.” *International Journal of Educational Research* 11 (2): 187-212. doi: 10.1016/0883-0355(87)90035-8.

Hattie, J., and H. Timperley. 2007. “The Power Of Feedback.” *Review of Educational Research* 77 (1): 81-112. doi:10.3102/003465430298487.

Heikkilä, A., M. Niemivirta, J. Nieminen, and K. Lonka. 2011. “Interrelations Among University Students’ Approaches To Learning, Regulation Of Learning, And Cognitive

And Attributional Strategies: A Person Oriented Approach." *Higher Education* 61 (5): 513-529. doi:10.1007/s10734-010-9346-2.

Higher Education Funding Council for England. 2013. "Student satisfaction at a nine-year high." *Higher Education Funding Council for England*. Last modified August 15, 2013. www.hefce.ac.uk/news/newsarchive/2013/news82928.html.

Higgins, R., P. Hartley, and A. Skelton. 2002. "The Conscientious Consumer: Reconsidering The Role Of Assessment Feedback In Student Learning." *Studies in Higher Education* 27 (1): 53-64. doi:10.1080/03075070120099368.

Hill, Y., L. Lomas, and J. MacGregor. 2003. "Students' Perceptions Of Quality In Higher Education." *Quality Assurance in Education* 11 (1): 15-20. doi:10.1108/09684880310462047.

Hughes, G., H. Smith, and B. Creese. "Not Seeing The Wood For The Trees: Developing A Feedback Analysis Tool To Explore Feed Forward In Modularised Programmes." In press in *Assessment & Evaluation in Higher Education*. doi:10.1080/02602938.2014.969193.

Huxham, M. 2007. "Fast And Effective Feedback: Are Model Answers The Answer?" *Assessment & Evaluation in Higher Education* 32 (6): 601-611. doi:10.1080/02602930601116946.

Hyland, F., and K. Hyland. 2001. "Sugaring the pill: Praise and criticism in written feedback." *Journal Of Second Language Writing* 10 (3): 185-212. doi:10.1016/s1060-3743(01)00038-8.

James, R., K. Krause, and C. Jennings. 2010. *The First Year Experience In Australian Universities: Findings From 1994 To 2009*. Melbourne: Centre for the Study of Higher Education, University of Melbourne.

Kember, D., J. Biggs, and D. Y. P. Leung. 2004. "Examining The Multidimensionality Of Approaches To Learning Through The Development Of A Revised Version Of The Learning Process Questionnaire." *British Journal of Educational Psychology* 74 (2): 261-279. doi:10.1348/000709904773839879.

Li, N. P., J. M. Bailey, D. T. Kenrick, and J. A. W. Linsenmeier. 2002. "The Necessities And Luxuries Of Mate Preferences: Testing The Tradeoffs." *Journal of Personality and Social Psychology* 82 (6): 947-955. doi:10.1037//0022-3514.82.6.947.

Marton, F., and R. Säljö. 1976. "On Qualitative Differences in Learning: I—Outcome and process." *British Journal of Educational Psychology* 46 (1): 4-11. doi: 10.1111/j.2044-8279.1976.tb02980.x

McCann, S., and C. Gardner. 2014. "Student Personality Differences Are Related To Their Responses On Instructor Evaluation Forms." *Assessment & Evaluation in Higher Education* 39 (4): 412-426. doi:10.1080/02602938.2013.845647.

Nicol, D. J. 2010. 'From Monologue To Dialogue: Improving Written Feedback Processes In Mass Higher Education'. *Assessment & Evaluation in Higher Education* 35 (5): 501-517. doi:10.1080/02602931003786559.

Nicol, D. J., and D. Macfarlane-Dick. 2006. "Formative Assessment And Self-Regulated Learning: A Model And Seven Principles Of Good Feedback Practice." *Studies In Higher Education* 31 (2): 199-218. doi:10.1080/03075070600572090.

Nicol, D. J., A. Thomson, and C. Breslin. 2014. “Rethinking Feedback Practices In Higher Education: A Peer Review Perspective.” *Assessment & Evaluation in Higher Education* 39 (1): 102-122. doi:10.1080/02602938.2013.795518.

O’Neill, G., R. Donnelly, and M. Fitzmaurice. 2014. “Supporting Programme Teams To Develop Sequencing In Higher Education Curricula.” *International Journal For Academic Development* 19 (4): 268-280. doi:10.1080/1360144x.2013.867266.

Omar, N. A., S. R. Matarsat, N. H. Azmin, V. C. A. Wei, M. M-I. M. Nasir, U. K. S. Sahari, M. Shahrill and L. Mundia. 2014. “The ideal psychology teacher: Qualitative analysis of views from Brunei GCE A-Level students and trainee psychology teachers.” *Asian Social Science* 10 (12): 184-194. doi:10.5539/ass.v10n12p184.

Parikh, A., K. McReelis, and B. Hodges. 2001. “Student Feedback In Problem Based Learning: A Survey Of 103 Final Year Students Across Five Ontario Medical Schools.” *Medical Education* 35 (7): 632-636. doi:10.1046/j.1365-2923.2001.00994.x.

Pitts, S. E. 2005. “'Testing, Testing...': How Do Students Use Written Feedback?” *Active Learning in Higher Education* 6 (3): 218-229. doi:10.1177/1469787405057663.

Poulos, A., and M. J. Mahony. 2008. “Effectiveness Of Feedback: The Students’ Perspective.” *Assessment & Evaluation in Higher Education* 33 (2): 143-154. doi:10.1080/02602930601127869.

Rae, A. M., and D. K. Cochrane. 2008. “Listening To Students: How To Make Written Assessment Feedback Useful.” *Active Learning in Higher Education* 9 (3): 217-230. doi:10.1177/1469787408095847.

Reid, D. J., and M. Johnston. 1999. “Improving Teaching In Higher Education: Student And Teacher Perspectives.” *Educational Studies* 25 (3): 269-281. doi:10.1080/03055699997792.

Rolfe, H. 2002. “Students' Demands And Expectations In An Age Of Reduced Financial Support: The Perspectives Of Lecturers In Four English Universities.” *Journal of Higher Education Policy And Management* 24 (2): 171-182. doi:10.1080/1360080022000013491.

Rosander, P., and M. Bäckström. 2012. “The Unique Contribution Of Learning Approaches To Academic Performance, After Controlling For IQ And Personality: Are There Gender Differences?” *Learning and Individual Differences* 22 (6): 820-826. doi:10.1016/j.lindif.2012.05.011.

Rowe, A. D., and L. N. Wood. 2008. “Student Perceptions And Preferences For Feedback.” *Asian Social Science* 4 (3): 78-88. doi:10.5539/ass.v4n3p78.

Senko, C., K. Belmonte, and A. Yakhkind. 2012. “How Students’ Achievement Goals Shape Their Beliefs About Effective Teaching: A ‘Build-A-Professor’ Study’." *British Journal of Educational Psychology* 82 (3): 420-435. doi:10.1111/j.2044-8279.2011.02036.x.

Sinclair, H. K., and J. A. Cleland. 2007. “Undergraduate Medical Students: Who Seeks Formative Feedback?” *Medical Education* 41 (6): 580-582. doi:10.1111/j.1365-2923.2007.02768.x.

Struyven, K., F. Dochy, and S. Janssens. 2005. “Students’ Perceptions About Evaluation And Assessment In Higher Education: A Review.” *Assessment & Evaluation in Higher Education* 30 (4): 325-341. doi:10.1080/02602930500099102.

Thorpe, M. 2000. “Encouraging Students To Reflect As Part Of The Assignment Process: Student Responses And Tutor Feedback.” *Active Learning in Higher Education* 1 (1): 79-92. doi:10.1177/1469787400001001006.

Voss, R., and T. Gruber. 2006. “The Desired Teaching Qualities Of Lecturers In Higher Education: A Means End Analysis.” *Quality Assurance in Education* 14 (3): 217-242. doi:10.1108/09684880610678540.

Vostal, F. 2015. “Academic Life In The Fast Lane: The Experience Of Time And Speed In British Academia.” *Time & Society* 24: 71-95. doi:10.1177/0961463x13517537.

Weaver, M. R. 2006. “Do Students Value Feedback? Student Perceptions Of Tutors’ Written Responses.” *Assessment & Evaluation in Higher Education* 31 (3): 379-394. doi:10.1080/02602930500353061.

Woodall, T., A. Hiller, and S. Resnick. (2014). “Making sense of higher education: students as consumers and the value of the university experience.” *Studies in Higher Education* 39 (1): 48-67. doi: 10.1080/03075079.2011.648373.

Table 1. Study 1, percentage of available money allocated to each lecturer quality in the necessity and luxury budgets, and the differences between the two proportions. Standard deviations in parentheses.

Lecturer quality	**Necessity budget (first £20)**	**Luxury budget (final £20)**	**Difference (Luxury – Necessity)**
Enthusiastic	13.92% (9.56)[a]	11.25% (10.75)[a]	-2.67% (16.01)
Good feedback	15.07% (9.80)[a]	10.21% (10.19)[a]	-4.86% (15.58)**
Warm/compassionate personality	9.06% (9.87)[ab]	11.97% (8.54)[a]	+2.91% (13.89)
Clear about how to succeed	13.36% (10.45)[a]	11.37% (9.62)[a]	-1.99% (15.78)
Topic expertise	14.08% (9.26)[a]	9.28% (11.35)[a]	-4.79% (16.48)*
Interactive lecturing style	5.73% (6.25)[b]	8.99% (14.06)[a]	+3.26% (15.41)
Intellectually challenging	6.99% (7.07)[b]	13.39% (9.82)[a]	+6.40% (12.27)***
Entertaining	7.13% (9.84)[b]	9.98% (12.16)[a]	+2.85% (16.45)
Clear presentation style	14.54% (11.61)[a]	9.66% (10.22)[a]	-4.88% (17.46)*

Note: Within each column, means without shared subscripts differ at $p < .05$ following a Bonferroni correction. In the 'Difference' column, * $p < .05$, ** $p < .01$, *** $p < .001$.

Table 2. Study 1, Reliability and intercorrelations of R-SPQ-2F (approaches to learning) scales and subscales,

		2	3	4	5	6
1	Deep Approach α= .65	.853***	.824***	-.471***	-.441 ***	-.428***
2	Deep Motive α= .56		.407***	-.380**	-.325**	-.376**
3	Deep Strategy α= .46			-.411***	-.420***	-.341**
4	Surface Approach α= .72				.919***	.928***
5	Surface Motive α= .55					.705***
6	Surface Strategy α= .47					

** $p < .01$, *** $p < .001$.

Table 3. Study 1, correlations between the money assigned to each lecturer quality in the necessity (£20) budget, and approach to learning.

Lecturer quality	**Individual difference measure**					
	Deep approach total	Surface approach total	Deep Motive	Deep Strategy	Surface Motive	Surface Strategy
Enthusiastic	-.11	**.24***	-.12	-.06	**.24***	.21
Good feedback	.05	-.04	-.08	.17	-.09	.01
Warm/compassionate personality	-.07	-.01	.03	-.16	.05	-.05
Clear about how to succeed	-.16	.12	**-.25***	-.00	.09	.13
Topic expertise	**.31****	**-.29***	**.34****	.17	**-.29***	**-.25***
Interactive lecturing style	.06	.02	.15	-.06	.03	.01
Intellectually challenging	**.36****	-.02	**.28***	**.33****	-.03	-.00
Entertaining	-.15	.09	-.02	**-.24***	.14	.03
Clear presentation style	-.10	-.13	-.12	-.04	-.16	-.09

* $p < .05$, ** $p < .01$.

Table 4. Study 2, percentage of available money allocated to each feedback quality in the necessity and luxury budgets, and the differences between the two proportions. Standard deviations in parentheses.

Feedback quality	**Necessity budget (first £20)**	**Luxury budget (final £20)**	**Difference (Luxury – Necessity)**
Highlights the skills I need to improve for future assignments	21.94% (8.11)[a]	9.30% (7.68)[abcde]	-12.63% (12.08)***
Suggests where I could get advice or help	7.41% (7.50)[cd]	7.96% (7.12)[de]	+0.54% (10.46)
Explains why the mark was appropriate with reference to the grade descriptors	11.83% (7.18)[b]	11.94% (9.56)[abcd]	+0.11% (11.52)
Includes comments that invited me to come and talk about the essay	6.99% (7.98)[cd]	8.12% (8.04)[bcde]	+1.13% (10.89)
Provides encouragement for things that were done well	9.62% (6.69)[bc]	11.67% (8.02)[abc]	+2.04% (10.82)
Comments on the professionalism of my writing style and/or how to improve it	11.67% (7.53)[b]	12.20% (10.09)[abcd]	+0.54% (11.19)
Corrects grammatical errors/advises me how to improve my grammar	4.73% (4.68)[d]	8.66% (6.64)[bcde]	+3.92% (6.79)***
Shows how my mark compared to others in the cohort	7.31% (7.54)[cd]	6.72% (6.28)[e]	+0.59% (7.73)
Comments on my understanding of the topic	9.35% (5.95)[bc]	12.85% (7.89)[a]	+3.49% (9.94)***

Highlights how well I have met the learning objectives	9.14% (6.15)[bc]	10.59% (10.50)[abcde]	+1.45% (11.90)

Note: Within each column, means without shared subscripts differ at $p < .05$ following a Bonferroni correction. In the 'Difference' column, *** $p < .001$.

Table 5. Study 2, Reliability and intercorrelations of R-SPQ-2F (approaches to learning) scales and subscales,

		2	3	4	5	6
1	Deep Approach α= .77	.904***	.918***	-.280**	-.343 **	-.189
2	Deep Motive α= .61		.660***	-.297**	-.340**	-.219*
3	Deep Strategy α= .62			-.217*	-.287**	-.129
4	Surface Approach α= .78				.893***	.935***
5	Surface Motive α= .62					.676***
6	Surface Strategy α= .66					

* $p < .05$, ** $p < .01$, *** $p < .001$.

Table 6. Study 2, correlations between the money assigned to each feedback quality in the necessity (£20) budget, and approach to learning.

Feedback quality	**Individual difference measure**					
	Deep approach total	Surface approach total	Deep Motive	Deep Strategy	Surface Motive	Surface Strategy
Highlights the skills I need to improve for future assignments	**-.29****	-.02	**-.28****	**-.25***	-.01	-.02
Suggests where I could get advice or help	.11	.19	.05	.14	.15	.19
Explains why the mark was appropriate with reference to the grade descriptors	.18	-.19	.17	.15	**-.26***	-.11
Includes comments that invited me to come and talk about the essay	.15	.01	.10	.17	.05	-.02
Provides encouragement for things that were done well	.07	.03	.07	.05	-.08	.11
Comments on the professionalism of my writing style and/or how to improve it	.03	-.13	.05	.00	-.06	-.17

Corrects grammatical errors/advises me how to improve my grammar	-.01	.09	.05	-.06	.16	.02
Shows how my mark compared to others in the cohort	.05	.10	.08	.01	.03	.14
Comments on my understanding of the topic	**-.24***	.01	-.17	**-.27***	.15	-.11
Highlights how well I have met the learning objectives	-.07	-.06	-.13	-.00	-.08	-.04

* $p < .05$, ** $p < .01$.