What if feedback only counted if the learner used it?

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For links and materials related to this talk, see:

http://www.psy.gla.ac.uk/~steve/talks/usedFbck1.html

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Part A: What underlies students' relationship with feedback?

What is wrong with students' relationship to feedback?

The questions:

Why don't students use feedback?

What is the real goal of feedback?

What goals do students really have which feedback could assist?

What is the real issue behind students' use of feedback?

The symptoms:

They don't pick up written feedback

They say they don't get feedback

They say it's not applicable to any future work they'll do

They look at the mark not the comments

They won't do any formative work unless there's a mark/credit

Possible analysis

A. For many students, it is as if they have absolutely no concept that feedback is part of their learning.
Either they have never had any feedback that helped them, or they didn't notice it was helping them; and no-one actually talks to them about its role in learning and in university courses.

B. When their work is ready to return, it has wholly gone from their minds.

- Consequently if they read the comments, it won't be helpful since the context has gone and anyway they aren't thinking about it: it is unrelated to their current work and deadlines.
- Looking at the mark is done to decide whether there is any emergency which requires action: if not, then no further attention need be paid to the comments.

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Part B: How should we change our approach to feedback?

The measure of feedback value

Feedback is of no use whatever unless it is used by students.
The criterion of teaching success here is: what specific thing they modify or reappraise as a result.

How fast the feedback is returned has no value in itself.
All the advice about the content and style of feedback has no value in itself.

We have to focus on what the student is going to do with it.
(See also Draper, 2009b: "What are learners actually regulating when given feedback?")

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New mottos: What would it be like to embrace these?

There is no point in giving feedback unless the learner uses it: modifies or actively reappraises something specific as a result.

What would our teaching be like if it only counted as feedback when the learner used it to determine their behaviour as a result?

(How would we check on this? How would we tutors self-regulate our behaviour?)

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What kinds of student actions should we expect and support with feedback?

Regulating effort.

Look at the mark: decide if I need to work more, or less, on this course.

Correcting content.

Have I "got" this topic? Which bits don't I know or understand properly?

Improving procedural skill.

Which aspects don't I perform adequately, or understand properly

What facet of my essays / lab skills don't I do well enough?

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Which goal are students using feedback to adjust (regulate)?

Self-regulating effort (2-dim feedback would assist this)

Learning: improving future process and products (fprompt supports this)

Revising the current product (doing corrections)

Deciding what subjects (courses) to take in future / next.

Deciding the quality / validity of the marker

Deciding the quality / validity of the marking process (is it just random?)

(See Draper 2009b)

=> much of the time it is NOT content knowledge which students are improving in the light of feedback.

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Part C: Making marks more usable and used

A case from a calculation based discipline.

Learners' goal:
Self-regulating their effort

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Making <u>marks</u> useful to students

For a different kind of feedback — marks from a quiz — a different kind of prompting seems effective. That is, a mark or grade by itself can change a student's actions: i.e. can function as formative feedback.

For comprehension, increasing amounts of evidence suggests that explanations are not what students mainly need: once motivated, they'll find them themselves. Instead, they need to know what it is they don't yet understand. I.e. not comments, but "marks". [Mastery learning; Mazur's "PI"; Smith et al.2009)]

However what makes a mark into a signal which the student believes tells them that more work understanding this topic is needed?

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The problem

Learners look at marks; usually ignore feedback comments.

Marks may be summative assessment i.e. primarily supposed to be meaningful to third parties, but nevertheless students try to use them.

My university publishes marking scales, but they don't give the student any usable comparisons for the mark they receive.

Like giving a volume in minims, a weight in scruples, or a temperature in degrees Réaumur: numbers actually are only useful to people who already remember the numbers of some cases measured on the same scale as comparison points.

All measurement is relative i.e. comparative to something else. What should a student compare their mark to?

Two answers

Normative help: how does your mark compare to the rest of the class?
We can't now publish the list of marks; but could show the distribution; or perhaps a normalised ranking: e.g. which of the 10 bins of ranks are you in e.g. between the top 20-30% of the class.

Ipsative help:
How does this mark (or rank) compare to your previous marks?
How do these comments compare to your previous comments?

ICT could be a big help here in bringing up earlier marks and comments to this student even when a different marker is now reading their work.

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Does this actually help learners?

Well, the commonsense argument seems quite good to me.

And I was struck a few years ago when a colleague mentioned using Ipsative comments routinely (I learn from mentions of good practice by colleagues, as well as from mentions of my bad practice from students).

And so it became a hypothesis for me that might explain a striking success locally:

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Eric Yao's success

Eric teaches a first year course at Glasgow: physics for engineers. N ≈ 40. For the 4 sessions 2007-11 the pass rate went: 40%, 67%, 38%, 95%. More than doubled it, then.

BIG success. But we don't know why. Some hypotheses:

1. "Teacher monitoring": active monitoring of and commenting on each student's work. Each student feels their work is noticed.
2. "Self-regulation". Aspects of the course support this better.
3. "2-dimensional feedback"

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What Eric did

These 3 were implemented by one of the things Eric did. He made the class complete some online MCQs every fortnight; and then as head of class, emailed each student individually using the marks from the question bank. He thus made a personal communication (1), commented both on how this mark compared to that student's previous marks (ipsative), and to the rest of the class on this piece of work (normative) (3), and thereby promoted their time on task i.e. their self-regulation (2) of effort by giving them this feedback on the effect of their effort on their marks.

A student I interviewed from this course made this vivid for me.
He ended up with an A, but didn't sound like a typical A student. He said he didn't like the 9am lectures and if he missed one he felt he'd caught up by reading the slides etc. on line; but he noticed that the quiz marks he got didn't support this feeling and so he made more effort to keep up attendance.

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Prompted student processing of marks

2-dim feedback by itself (e.g. from a computer) might not do it.

Eric additionally wrote personal emails thus achieving what I have called "teacher monitoring".

You could explain it in social terms; or you could explain it in cognitive terms directly parallel to the "Prompted student processing of feedback" described in my first talk. His emails provide a prompt for students to notice and reflect for a moment on their marks (rather than on qualitative feedback). Without that, they may not pay any attention and so the whole exercise of doing the quiz and getting a mark would be without effect on the learners.

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Comments on 2-D feedback

Different students are not all interested in the same scale / comparison. A star student often likes the normative comparison; a middling student likes to see if they have improved instead of focussing on how they are still way behind the star.

These are not the only 2 comparisons, and may perhaps not be the best 2 either.

What my students would most like in addition is predictive feedback: a prediction of how this current mark predicts (at least based on historical data) their eventual degree class.

Furthermore what we should really do is not return a single portmanteau mark, but a vector of marks: one for each stated marking criterion (as Rowntree argued in 1977). This would still be marks without comments, but would greatly extend the useful information content.

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Summary: 3-D feedback

Marks, like any measure, are not meaningful unless the reader has benchmarks in their head to compare them to.

The 3 scales which are probably the most wanted are:

- Ipsative: compared to the student's own previous marks
- Normative: compared to the rest of the class on the same task
- Criterion-based: what degree class does this mark predict?

Part D: Prompting the processing of feedback: Making feedback comments used

A case from an essay based discipline.

Learners' goal:
regulating their grasp of skills and content

Some things I've tried in my own feedback practice

(I have a year 3 (of 4) tutorial group of 5-6 students each semester.)

I organise reciprocal peer critiquing (RPC), which they value, and which also sets up a good peer atmosphere for discussion.

But my own feedback seemed less successful, even though I:

- Provide the feedback in typed form (they say this is important)
- Provide both positive and negative comments
- Suggest specific changes that could have been made.
- Promote elective feedback
  (the learner says what issues they particularly want feedback on)
- Give them all the feedback for each of them (peer sharing).
- Require them to pick up the feedback from me, and read it on the spot.
- Promote discussion of feedback with myself.
- Promote discussion of feedback with peers.

Nevertheless ... failure

Yet disappointingly, not a lot of discussion happened.

I had failed to get good discussion about returned feedback to happen, and wanted it to.

Learners (my tutees anyway) seemed just not to be thinking about the feedback, even though they turned up to meetings and read the feedback. Their memory of their original work had faded from both their memory and their to-do list, and reading even extensive feedback was not enough to make them think about it actively.

Then success: Prompted student processing of feedback

As before, then after they have read the feedback, sitting round in a group in my office, I asked them each to fill a prompt sheet:

1. You were keen to know what mark I had given you.
   a. Why is that important to you?
   b. What will you do differently because of the mark? (or what would you have done differently if the mark had been a lot different?)
2. If you had to re-edit this essay, then how would you apply my feedback to do this, if at all?
3. How will you apply my feedback to writing your next essay?
4. How will you apply my feedback to critiquing other students' essays in future?
5. Re-phrase (each of) my comments on your essay in your own words: what do they mean, what did they apply to what future actions do they imply?
6. Is the feedback I wrote at all useful to you personally, as far as you can tell now?

Evidence from 2 trials

Almost all said they valued the oral discussion around the feedback process as greatly as the personal written feedback.
One commented that it made her actually process the feedback, implying that normally she wouldn't have done so.

Before I started using the prompt sheets, even very good students would say after receiving my feedback things like: that's interesting but I don't think it will be relevant to my next assignment which will be marked by someone else.
Now, they don't say that, and have little trouble filling in on the sheet things they will do differently in the light of the feedback.

So:

The job of providing written feedback isn't done with the writing: we have to do something to get learners to process it.

They showed no sign of resenting the time to do this; and one student, who couldn't make the group time, filled it in at home before coming in to see me.

Thus to summarise, there are 2 jobs to do in making feedback actually useful:

- Making **comments** useful to (acted on by) students
- Making **marks** useful to (acted on by) students

Both involved an aspect of prompting reflection by students.

Part E: Feedback calendars

A generic admin. solution to creating student expectation that feedback will be useful and usable.

Learners' goal:
Forming their awareness, plans and expectations about available course resources.

Feedback calendars are ...

Feedback calendars are a sheet published to students on a course, not only of hand-in dates, but of when their work will be returned and with what types of feedback (marks and comments).

If they are beneficial, then they are very attractive because they are simple, cheap, and sustainable; at least once they are a regular part of how a course is administered.

Jim Baxter's course design

A weekly cycle in a course, based on student virtual groups in a VLE.

Assignment	Work start date	Student hand-in date	Fback available	Marked by	Mark	Comments	Written / oral	Discussion ?	Feedback shared with peers?	Alternative good answers shown
Group VLE exercise	Monday	Monday (week later)	Tuesday	Tutor (peers)	No	generic + best examples	written	yes (on VLE)	group	Yes

An example of a feedback calendar

Feedback calendar for computer science 2011

Feedback calendar for Computer Science CSIP Level 1 Semester 1

Assignment	Work start date	Student hand-in date	Feedback available	Marked by	Mark	Comments (show generic + individual)	Written / oral	Discussion ?	Feedback shared with peers?	Alternative good answers shown?
Friday lecture preparation	Wed	Fri	Fri	Lecturer	Yes	0-10 mins per EVS question	Oral	Yes	Group	Sometimes
Weekly Lab prep	Lab	Lab	Lab	Tutor	Tick/ cross	1 – 10 mins total	Oral	Yes	Solo	Yes/depends
Weekly lab – student questions	Lab	Lab	Lab	Tutor	Yes	On demand	Oral	Yes	Solo	Depends
Weekly lab – summative	Lab	End of lab	End of lab	Tutor	Yes	On demand	Oral	Yes	Solo	Depends
Feedback in lecture following lab	Lab	Lab	Wed	Tutor	No	30 mins using EVS, plus 7 mins other talk	Oral	Yes	Group	Yes/depends
Mock class test (EVS)	14 Oct	14 Oct	14 Oct	Tutor	Yes	Generic 0-2 mins per qu.	Oral	Some	Group	Correct answers
Mock lab exam	Week 5 lab	Week 5 lab	Week 5 lab	Tutor	Tick/ cross	0 – 2 mins	Oral	Some	Solo	Model answer
1st class test	28 Oct	28 Oct	Week 7 lab	Tutor	Yes	0 – 20 words	Written	Some	Solo	Model answer
Lab exam	28 Nov	Week 12 lab	10 Jan	Tutor	Yes	10-50 words	Written	Usually no	Solo	Model answer
2nd class test	Week 13	Week 13	10 Jan	Tutor	Yes	Generic 25 mins	Oral	Usually no	Solo	Model answer

Feedback calendars' aims, audiences

Feedback calendars have two audiences, and hence aims:

A. The students: to make them aware of feedback delivery as a significant part of the course. This is partly to raise NSS ratings on feedback; but more importantly because students tend not to attend to and use feedback, even though we believe it is important for learning.

When students are shown a calendar, they are generally approving of it: it improves their view of the course. But little sign of changing behaviour so far.

B. Staff: A reminder and reflective prompt for staff: what do we do about feedback on this course? should we adjust or redesign the kinds of feedback we give?

This talk, like the calendars, may prompt some of this discussion.

Structure of a calendar (2): Fields

The big questions are: what properties to have as columns in a feedback calendar (besides the hand-back date). Here are some to consider.

- Peer feedback is important, and in some ways better than staff feedback. It should be in the calendar if it is part of the design. SO a col. should say peer/expert as author of the feedback.
- Tutor feedback shared amongst peers? (I got this idea from a student)

- Mark (summative success metric)? yes/no
- Comments (formative information)? yes/no
- Written / oral?

- Discussion / dialogue: Often thought to be the most important bit of feedback, but often omitted. "with tutor" "with peers", "with both tutor and peers", "only on request", etc. are some ...

Feedback calendars as a prompt

To learners:
See feedback as a resource, expect to see it, and what kind of information each feedback occasion will provide. What they might do with it.

To teaching staff:
Think about feedback from the students' viewpoint. What kind is it? how much is it? Is this OK? Would it be easy to add some recommended features e.g. example student answers, discussion of the feedback, etc.

Part F: Conclusion

Cases of what learners find useful

Seeing others' essays, work.... For years I didn't understand why students' top rated benefit of RPC was just seeing others' work.

"Catalytic" assessment (Draper 2009a; Smith et al. 2009): i.e. brain teasers. The detailed evidence shows that being told the answer (resolution) isn't necessary: being convinced they have a problem is the key event.

Bloom's Mastery Learning: weekly formative diagnostic tests; then a period for (self-)remediation. Knowing which bits they hadn't learned well enough was the important thing.

JITT (Novak et al.)

The full answer to what learners need is implicit in "contingent tutoring" — see Wood et al. (1975, 6, 8)

Summary

There is no point in giving feedback to a learner unless the learner uses it.

- Feedback calendars help move feedback use into focus for both staff and students.
- Prompted processing of essay **comments** does this even more directly; and so lead to *improving procedural skill* (by diagnosing which aspects require improvement).
- "2D" or "3D" feedback can help turn **marks** into comparisons that are meaningful to the student, and so lead to *regulating effort*.
- Marks can also lead to *correcting content* (by diagnosing which topics require improved understanding).

A place to stop

Expressed as a Design principle:

Ensure there is something that triggers the learner into processing any feedback into actions.

- Questions?

For the slides, handout etc. see:

http://www.psy.gla.ac.uk/~steve/talks/usedFbck1.html