

## 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/usedFbck4.html>

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## Part A: What underlies students' relationship with feedback (from teachers to learners)?

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## 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

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## Part B: How should we change our attitude 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?")

If they do nothing because of feedback, then no value.

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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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### Directions for us to go

1. We want not delivery but use of feedback by learners
2. We should research what goals learners are using feedback to act on: not assume they are what we assume or wish.  
(next slide)
3. We should modify our communication of feedback until it does get used
4. We should study the (few) cases where we know feedback has been used  
(Following sections of this talk)

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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 understanding.

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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### Part C: Making marks more usable and used

#### Case 1:

- a) **Marks** not comments
- b) **Calculation-based** not essay-based discipline.
- c) Learners' goal: Self-regulating their **effort**

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### Making marks useful to students

For a different kind of feedback — marks from a quiz — a kind of prompting different from giving comments 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 on 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.

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

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 in some relevant cases measured on the same scale as comparison

### The first two answers

Normative help: how does your mark compare to the rest of the class?

We can't 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).

This became a hypothesis for me that might explain a striking success locally ....

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## Eric Yao's success

Eric taught a first year course at Glasgow: physics for engineers.  $N \approx 40$ . For the 4 sessions 2007-12 the pass rate went: 40%, 67%, 38%, 95%, 91%.

More than doubled the pass rate, then.

BIG success. But we can't be sure 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" of effort. Aspects of the course support this better.
3. "2-dimensional feedback"

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## What Eric did

These 3 were all 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" I'll describe next. 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 student.

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 number, are meaningless unless the reader has benchmarks in their head to compare them to.

Three such scales are:

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

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

### Case 2:

- a) **Comments** not marks
- b) **Essay-based** not calculation-based discipline.
- c) Learners' goal: regulating their grasp of **skills** and content

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### 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.

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### Nevertheless ... failure

Yet disappointingly, not a lot of discussion happened.

I had failed to get good discussion about returned feedback to happen.

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.

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### 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 first 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.

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### 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.

Probably: what matters is student processing (reflection) of the comments into future actions.

The prompt sheet can prompt it.

Dialogue can prompt this.

Or anything that prompts dialogue about the feedback's implications.

### Other kinds of prompts to process or act on feedback (1: RPC)

This is supported by some of the comments I get when I do "reciprocal peer critiquing" (RPC) with my students. They are required to read and produce comments on essays by two of their peers, and to receive them.

[Aropo] is software to support RPC in a big class]

Some of them say things like "the comments are not really different from what my tutor wrote, but it's somehow much more useful to discuss it": again suggesting that tutors may already be doing well as far as written comments go, but the missing ingredient is prompting processing by the learner.

Tutors [Jason] have also said "If they come to discuss the feedback they got, all I really do is read it out to them ..."

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### Seeing others' ways of doing it (2)

However work by Morrow (2006) on RPC showed that on average, though students valued many aspects of it, the single most valued aspect was simply seeing other students' work. After all most tutor comments on what you did wrong are no use until you can imagine alternative ways to do it.

In which case perhaps simply giving students any examples of other students' work, even without direct comments on them, may be a key missing ingredient (rather than my magic prompt sheet).

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### Sequenced assignments (3)

Another technique consistent with this theme is having staggered assignments each of which is assessed, but which is a step towards a bigger assignment built on the material in the earlier ones (e.g. giving a short talk, writing it up as a short essay, doing a dissertation on the same topic).

Because each new assignment builds on the material of the previous one, students can see how to apply feedback and are motivated to do so: achieving what discussion and my prompt sheet are getting at.

Patchwork text (Scoggins & Winter, 1999)

Vicky Gunn's "Body and belief" course.

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### The futuristic e-learning vision of this (4)

You may like to look at John Seely Brown's published visions:

(<http://www.johnseelybrown.com/>)

Because he describes some learner "collectives" that fire up and accelerate learning, and perhaps those learners then get the same effect from feedback from each other and a focus on doing (which entails acting on feedback).

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### The futuristic e-learning vision of this (4b)

(John Seely Brown's visions)

Activity-based learning: doing comes first, learning to support it. Immediate feedback on whether your thing works: and immediate opportunity and desire to act on feedback whenever possible.

Peer reciprocal help.  
(Relies on everyone doing similar but not identical things.)

Reinforced by social credit mechanisms.

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### Summary of prompts for processing / using feedback

1. My feedback prompt sheet exercise
2. RPC (reciprocal peer critiquing)
3. Simply seeing other students' ways of doing things
4. Sequenced / cumulating assignments e.g. Patchwork text, ...
5. Learning designs that trigger action-based learning (i.e. the task comes first, students then seek ideas about how to do it), nurtured in "learning collectives".
6. Bloom's Mastery Learning talks of the need to retrain students in how to interpret and use their formative testing.

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## A note on emotion and feedback

Feedback sometimes provokes strong emotions in the learner. Some literature discusses this; much ignores it. My own view is that this is not of primary importance, but it can be of considerable secondary importance, as in other fields e.g. the way patients can effectively go deaf when the doctor gives them bad news, so they do not hear vital information on what they need to do next.

A general tactic to address this is, instead of phrasing feedback as personal criticism ("your essay lacked a conclusion"), phrase it as a personal feeling ("when I came to the end, I wondered what your overall view was").

*(This is called the "reader response theory" approach to criticism.)*

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## Part E: Conclusion

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## Summary (1)

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

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 involve an aspect of prompting reflection by students.

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## Summary (2)

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

There are at least three distinct student goals to serve:

- **Improving procedural skill** comes from processing essay comments (by diagnosing which aspects require improvement).
- **Regulating effort**: "2D" or "3D" feedback turns marks into comparisons tell the student whether more effort is needed.
- **Correcting understanding**: Not a single total, but marks by question/item diagnose which topics require improved understanding. I.e. marks without comments can be very helpful IF they are clearly diagnostic.

## Theory: time to wake up

Just because a researcher labels an intervention or learning design as "feedback" does not mean that this is an accurate or complete identification of the active causal factor.

Hattie & Timperley (2007) showed that feedback quite often reduces learning.

Black & Wiliam (1998) cannot be taken as clear evidence that feedback is powerful. Perhaps we haven't understood what it is that matters, even in the cases when it works. I.e. they judged that the important factor in each study was feedback, but other factors were present in every case.

(conversely) Bloom's mastery learning, which got a bigger effect size (1.0) than most in the feedback literature, was not called "feedback" by its practitioners. They spoke about "formative testing", and retraining students on how to interpret and act on this feedback.

If the most successful don't call their interventions "feedback", shouldn't we listen?

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## Message

**Aspiration:** Feedback that is used by learners  
(There is no point in giving feedback to a learner unless the learner uses it.)

**Design principles:**

1. Ensure something triggers the learner into processing feedback into future actions.
2. Ensure marks are expressed on scales which are meaningful to the learner (connect to something they already know).
3. Expect that several different scales or comparisons need to be provided for every mark.

## A place to stop

*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/usedFbck4.html>

or google "glasgow draper talks"

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