

Seven Principles of Good Feedback Practice

Putting feedback back into the hands of the user



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Plan

- ❑ Background
- ❑ Re-engineering Assessment Practices (REAP) project (2005-2007)
- ❑ Principles of good feedback practice
- ❑ Brief examples of implementation
- ❑ Student PEER review (2011-15) - a high level implementation of principles
- ❑ Questions and discussion

Re-engineering Assessment Practices project

- ❑ Scottish Funding Council (£1m): 2005-2007
- ❑ 3 Universities: Strathclyde, Glasgow, Glasgow Caledonian
- ❑ Large 1st year classes (160-900 students)
- ❑ A range of disciplines (19 courses ~6000 students)
- ❑ Many technologies: online tests, simulations, discussion boards, e-portfolios, e-voting, peer/feedback software, VLE, online-offline
- ❑ Learning quality and teaching efficiencies
- ❑ **Assessment for learner self-regulation**
- ❑ www.reap.ac.uk



Background Research

Literature Review

- ❑ Nicol, D. & Macfarlane-Dick, D. (2006). Formative assessment and self-regulated learning: A model and seven principles of good feedback practice. *Studies in Higher Education*, 34 (1), 199-218
- ❑ Nicol, D & Milligan, C. (2006), Rethinking technology-supported assessment practices in relation to the seven principles of good feedback practice. In C. Bryan & K. Clegg, *Innovative assessment in higher education*, Routledge.

- REAP project: www.reap.ac.uk

Rethinking assessment and feedback

1. Consider self and peers as much as the teacher as sources of assessment and feedback
 - Tap into different qualities than teacher can provide
 - Saves time
 - Provides considerable learning benefits (lifelong learning)
2. Focus on every step of the feedback cycle:
 - Understanding the task criteria (Sadler, 1983)
 - Applying what was learned in action
3. Not just written feedback:
 - Also verbal, computer, vicarious, formal and informal

Seven principles of good assessment and feedback

Good assessment and feedback should:

1. Clarify what good performance is (goals, criteria, standards).
2. Facilitate the development of reflection and self-assessment in learning
3. Deliver high quality feedback to students: that enables them to self-correct
4. Encourage peer and student-teacher dialogue around learning
5. Encourage positive motivational beliefs & self esteem through assessment
6. Provide opportunities to act on feedback
7. Provide information to teachers that can be used to help shape their teaching (making learning visible)

Nicol and Macfarlane-Dick (2006)

Good assessment and feedback should:

- 1 Clarify what good performance is (goals, criteria, standards).
- ❑ Teacher gives feedback in relation to goals & criteria of the assignment.
 - ❑ Students write out criteria in own words before an assignment
 - ❑ Students derive criteria from exemplars (e.g. Essays) before an assignment
 - ❑ Groups create problems (e.g. MCQs) for others to solve (Engineering)
 - ❑ Groups create criteria for an assignment

Good assessment and feedback should:

2. Facilitate the development of reflection and self-assessment in learning

- ❑ Students provide an **abstract with an essay** submission
- ❑ Provide written explanation of the concepts underpinning a set of problem-solving questions (holistic evaluation)
- ❑ Evaluate the elegance of different solution pathways to a problem they are working on.
- ❑ Students request the feedback they want when they hand in an assignment
- ❑ Students **evaluate their own work against criteria** when they hand it in
- ❑ Students **evaluate the work of peers who have completed the same assignment** (peer review)

Good assessment and feedback should:

3. Deliver high quality information to students: that helps them to self-correct

- ❑ Teacher provides ‘feed-forward’ rather than feedback
- ❑ Focus **feedback on skills/processes** rather than content
- ❑ Give **feedback on students’ self assessments**
- ❑ Students request type of feedback they would like when hand in assignment
- ❑ Don’t give feedback - **point to resources that would help students resolve the weaknesses** in their work

Good assessment and feedback should:

4. Encourage interaction and dialogue around learning (peer and teacher-learner)
 - ❑ Students comment on received feedback
 - ❑ Discussions of feedback in tutorials or scheduled feedback conversations (e.g. bring and discuss)
 - ❑ Collaborative assignments - informal feedback dialogue
 - ❑ Electronic voting methods: polling and peer and class-wide discussion (Nicol and Boyle, 2013)
 - ❑ Dialogue can be wrapped around any feedback process - before, during and after assignment (Nicol, 2010)

Good assessment and feedback should:

5. Encourage positive motivational beliefs and self-esteem

- ❑ Emphasise **mistakes are part of learning**
- ❑ Give feedback advice during an assignment rather than at end
- ❑ **Sequence tasks** for progressive level of difficulty
- ❑ **Use non-judgemental feedback** (e.g. reader response feedback)
- ❑ Give learners some **control over** topic or timing of assignments or the type of feedback they receive
- ❑ Implement the other principles (as they all increase the students sense of ownership and control)

Good assessment and feedback should:

6. Provide opportunities to act on (respond to) feedback

- ❑ Align your feedback to goals/criteria
- ❑ Provide feedback as action points
- ❑ Linked assignments so feedback can be used
- ❑ Get students to respond to teacher feedback - say what it means
- ❑ Get groups to discuss feedback and create action plan
- ❑ Get students to say how used feedback when submit next assignment [use a proforma]

Good assessment and feedback should:

7. Provide information to teachers that helps them shape their teaching (making learning more visible)
 - ❑ Get students to request feedback they want
 - ❑ Just-in-time teaching: set online MCQs before lecture and adapt teaching to results
 - ❑ Electronic voting methods allows dynamic adaptation in class
 - ❑ One-minute papers: at the end of a lecture ask students to write down ‘what question remains outstanding in your mind?’
 - ❑ Set online discussion tasks after a lecture or workshop

Results of REAP

Local redesigns

- ❑ 19 courses redesigned
- ❑ Success: learning gains in exams (11 out of 19 courses) improved quality without increased staff time, high levels of student satisfaction

Institutional developments

- ❑ Deputy Principal set up working group: new Assessment and Feedback policy (Strathclyde) grounded in principles agreed by Senate
- ❑ Principles embedded in Quality Enhancement procedures
- ❑ Many departmental/university initiatives referenced REAP and used the principles
- ❑ Widespread use of principles, nationally/internationally
- ❑ Feedback as dialogue campaign for students (see leaflet)

Advice on how to make the most of *feedback* is available at

www.strath.ac.uk/learnteach/feedback

Here you will find:

- Examples of activities that will help you get the best out of feedback
- Frequently asked questions about feedback and possible approaches
- Advice to help you reflect on and evaluate your own work
- Guidance on how to approach staff with feedback questions
- The University policy on assessment and feedback

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Feedback
is a DIALOGUE



Advice for
Students

What is *feedback*?



- ❑ Feedback is information about your work that is used to make improvements.
- ❑ Feedback comes from tutors, from fellow students, from others – and from yourself.
- ❑ It might involve written comments, a discussion or your own analysis of your work.
- ❑ Effective learners seek out feedback from many sources.
- ❑ How useful feedback is depends on what you do with it.

Why is *feedback* important?



- ❑ Feedback from the tutor helps you to identify strengths and weaknesses in your work and to make improvements.
- ❑ Generating feedback on your own work enables you to develop as an independent learner.
- ❑ Feedback from peers can enrich the information you receive about your work.
- ❑ Giving feedback to others develops your skills in making professional judgements.
- ❑ Being able to evaluate the quality of your own work, and the work of others, is an essential skill for all graduates.

Make *feedback* work for you



- F**IND OUT what is required before you begin an assignment
- E**XCHANGE ideas with peers about criteria and approach
- E**VALUATE your own work before handing it in
- D**ISCUSS the feedback you receive with others
- B**E PROACTIVE in giving and seeking feedback
- A**SK FOR the feedback you want when you hand in your work
- C**REATE study groups for regular feedback conversations
- K**EEP a note of feedback, reflect and act on it

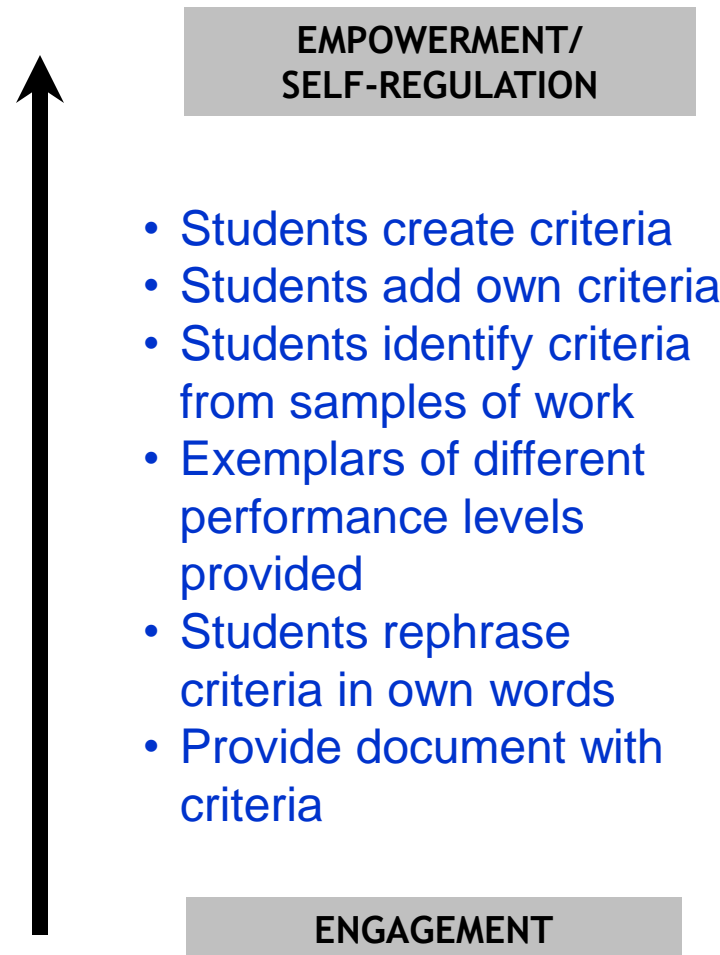
Why use principles

1. Principles give clear guidance about what needs to happen if we are to develop learner self-regulation
2. Help translate the research into accessible ideas for practice across disciplines
3. Help identify where the applications of technology can create most benefit

Guidelines for Implementation


1. A single principle or many?
2. Balance teacher feedback with peer and self-generated feedback
3. Focus on developing students' own ability for critical evaluation
4. The more actively engaged students are the better the resulting design

Principle 1: Clarify what good performance is (goals, criteria. standards)



Principle 6: Provide opportunities to act on feedback

EMPOWERMENT/
SELF-REGULATION

- 
- Get students to say how feedback used when submit new assignment
 - Get groups to discuss feedback and create action plan
 - Get students to say what feedback means in own words
 - Reward use of feedback
 - Provide feedback as action points
 - Link assignments so feedback can be used
 - Align your feedback to goals/criteria

ENGAGEMENT



Developments since REAP

1. PEER Review research (2010-16)
2. www.reap.ac.uk/PEERToolkit.aspx
3. Maximising the students role in feedback processes
4. To develop self-regulation students must engage in evaluative acts themselves at a high level

Feedback in professional and workplace settings

1. In the professions, feedback never comes from a single source: task is usually to evaluate, weigh up and reconcile and respond to different and sometimes contradictory feedback perspectives.
2. Professionals are not just ‘consumers’ of feedback but also ‘producers’

Nicol , Thomson and Breslin (2014) Rethinking feedback practices in higher education: a peer review perspective, *Assessment and Evaluation in Higher Education*, 39(1), 102-122

Purpose of Feedback

- ❑ Feedback should develop the students' capacity to make **evaluative judgements** both about their own and that of others (Boud and Associates, 2010: Cowan, 2010; Sadler, 2010)
- ❑ Feedback should serve the function of progressively enabling students to better **monitor, evaluate and regulate their own learning**, independently of the teacher (Nicol and Macfarlane-Dick, 2006: Nicol, 2009)

Peer review

Definition of peer review

- ❑ ‘Peer review is an arrangement whereby students produce a written assignment then review and provide comments on assignments produced by peers in the same topic domain’ (Nicol, 2014)
- ❑ Two processes - reviewing and receiving reviews - qualitatively different in their benefits.

The focus

- ❑ Not talking about scenarios involving
 -informal feedback in collaborative tasks
 -students evaluating each other's contribution to group working
 -students grading/marking each other's work, although some rating might be part of peer design

- ❑ For clarity I use the term 'peer review' not 'peer assessment'.

Peer feedback receipt: augmenting teacher feedback

- ❑ Increases quantity and variety of feedback
- ❑ No extra workload on teacher when software used (e.g. PeerMark)
- ❑ Often perceived as more understandable as peers ‘on the same wavelength’ (Topping, 2003: Hounsell, 1987)

Receiving feedback reviews

- ❑ After receiving peer feedback students normally have opportunities to update their assignments. Hence **activates reflective and knowledge re-construction**
- ❑ Simulates professional scenarios - evaluating and reconciling different feedback perspectives - calls for **acts of judgement**
- ❑ Cho and MacArthur (2010) showed that students made more complex revisions to their work when feedback received from **multiple peers** when compared against a single peer or a single teacher.

However...

Not enough attention has been focused on the **potential of peer feedback** not just as a way of increasing the quantity and quality of the feedback students receive, but also **as a way of giving students practice in making evaluative judgements and constructing feedback**

See Nicol (2010) Developing students' ability to construct feedback.
Available at:

<http://www.enhancementthemes.ac.uk/resources/publications/graduates-for-the-21st-century>

PEER projects funded by JISC UK

One aim was to:

- ❑ Separate out the different feedback components involved in peer review - receiving feedback versus giving feedback
- ❑ Prior research had either reported only receipt of peer feedback
- ❑ Or on combined effects of producing and receiving
- ❑ Much research on peer review was confounded by an emphasis on having students mark each other's work

see

www.reap.ac.uk/PEER.aspx

www.reap.ac.uk/PEERToolkit.aspx

Example 1: Engineering Design

Peer Project case study

- ❑ DM 100 Design 1: first-year class

- ❑ Dr Avril Thomson, Course Leader, Design Manufacturing and Engineering Management (DMEM), University of Strathclyde
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- ❑ Caroline Breslin, Learning Technology Adviser, University of Strathclyde
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Funded by JISC: see www.reap.ac.uk/PEER.aspx

Engineering Design 1

- ❑ 82 first-year students
- ❑ Design a product - ‘theme eating and resting in the city’
- ❑ Research in groups (in city, in library etc.)
- ❑ Individually produce a Product Design Specification (PDS) - detailed requirements for and constraints on design (rationale, performance, standards, manufacturing etc)
- ❑ Given a PDS exemplar from another domain to show what’s required (stainless steel hot water cylinder)
- ❑ Online learning environment: Moodle and PeerMark part of Turnitin suite

DM 100: Design 1

Peer review task

- ❑ Individually, each student peer-reviewed and provided feedback anonymously on the draft PDS of two other students
- ❑ Criteria: (i) completeness (ii) convincingness of rationale (iii) specificity of values (performance) (iv) one main suggestion for improvements with reasons
- ❑ Students used experience, giving and receiving feedback to update own PDS
- ❑ Peer review not assessed directly but 10% marks for professionalism which included participation in peer review.

Evaluation

1. Online survey completed by 64 students
2. Focus group interviews
3. Peer review comments recorded online
4. Course work marks compared to previous years

Results 1

Which aspects of the peer review did you learn from?

- | | |
|--|-------|
| <input type="checkbox"/> Giving feedback | 10.9% |
| <input type="checkbox"/> Receiving feedback | 26.6% |
| <input type="checkbox"/> Giving and receiving feedback | 54.7% |
| <input type="checkbox"/> Neither giving or receiving | 7.8% |

Results 2

Did you modify your initial submission as a result of the peer review activity?

Yes, as a result of the peer review given	23.4%
Yes, as a result of the peer review received	25.0%
Yes as a result of the peer review given AND received	28.1%
No	21.9%
N/A	1.6%

Results: student comments

If yes, please give specific examples of modifications (n=41)
[Comments are from different students]

- I added a couple of paragraphs and improved existing paragraphs, this added two full A4 pages to my work
- I provided more specific numeric values and expanded my rationale after seeing someone else's PDS and after receiving feedback
- I added a legal and patents section
- Improved the rationale, included more facts
- I made some of my numeric points more specific to my final design concept.

Principle 6: Encourage students to act on feedback

Results: learning from RECEIVING reviews

Please give examples of what you learned from RECEIVING peer reviews from other students (n=54)

- Specific content mentioned: Depth of analysis needed, more numerical data and figures, stronger rationale, how to structure it better etc. [content deficiencies/improvements needed]
- Receiving peer reviews gave me insight into what others thought of my work and gave me a direction to improve [reader response]
- Where the PDS was confusing to understand [reader response]
- Parts that I had previously missed were brought to eye such as market competition [noticing]
- The person who peer reviewed my PDS gave me positive feedback which helped me a lot [motivation]
- Not much, they...[the peer reviews]...weren't very good [no value]



Results: learning from PROVIDING reviews

Please give examples of what you learned from PROVIDING peer reviews of other's work (n=47)

- How to look at work critically that isn't your own [**critical judgement**]
- Thinking from a critical point of view [**critical judgement**]
- I was given a greater understanding of the level of the work the course may be demanding [attention to **expectations/criteria**]
- Allowed me to see from an assessor's perspective [**expectations/criteria**]
- When giving advice to people on theirs, it gave me greater perception when reviewing my own work by listening to my own advice for example [**reflection/transfer**]
- I had a chance to see other peoples work and aspects of their work that I felt were lacking in my work, this helped me to improve my work [**reflection/transfer**]

Results: How you carried out peer review

Could you make any comments about how you carried out the peer review? How did you evaluate the quality of the work to provide a response to the peer review questions? (n=37)

- I **compared** it to mine and ...and said how I would improve it
- Partly by **comparing** my work to theirs
- I tried to think about what I wrote and whether this PDS was better or worse

Principle 2: self-assessment

Focus groups

□ How did you go about reviewing?

'I read it through and compared it with what I had done to see if they had put something I had not done and then I added it in if they hadn't. The four questions...[criteria provided by the teacher]...were useful as they provided a framework for the review. If we hadn't had the questions it would have been difficult. I did the reviews separately and then answered one then the other. The first was a better standard than the other - so I used the ideas from the better one to comment on the weaker one. I also read the guidelines in class when I did the peer review. There were ideas from the good one that I hadn't even thought of in mine'

Results: reviewing

In the focus groups the effect of the review questions (criteria) was probed further. Typical comments were:

- ❑ You compare it (the other student's work) to the criteria but then in the back of your mind **you're comparing it to our own at the same time.**
- ❑ I went down the questions and **compared it to my own..**I was trying to think what has this person done. Have they put in more effort or knowledge than me.
- ❑ I went through the questions **keeping my own in mind**
- ❑ **You've got what you've done at the back of your mind** while going over theirs so you see where you've gone wrong without anyone pointing it out so you learn it yourself

'Reviewing is grounded in comparisons with students' own work' (Nicol, Thomson and Breslin, 2014)

Benefits of reviewing (1)

- ❑ Reviewing elicits multiple acts of reflection and evaluative judgement (all linked to own work = principle 2)
 1. Evaluate peer's work against own work
 2. Evaluate one peer's work against another (and own work)
 3. Evaluate work against given criteria to produce response (while still considering their own work)

- ❑ The **pre-condition** for these effects
 - Students must first have produced an assignment in the 'same domain' as those that they are asked to review

Nicol, Thomson and Breslin (2014) Rethinking feedback practices in higher education: a peer review perspective, *Assessment and Evaluation in Higher Education*, 39(1), 102-122

Benefits of reviewing (2)

- ❑ Students both create and apply evaluative criteria
 - ❑ Create criteria as they compare work with own (holistic)
 - ❑ Apply explicit criteria (analytic) to instances of practice
 - ❑ Simulates what experts do when they make evaluative judgements

- ❑ ‘Through reviewing students generate richer criteria than those provided by the teacher but sounder criteria than those they might be able to formulate on their own’ (Nicol, Thomson and Breslin, 2014)

Focus groups

- What do you think is best for learning - giving or receiving feedback?

*‘For me it would probably be **to give feedback** because I think seeing what other people have done is more helpful than getting other people’s comments on what you have already done. By looking at other people’s work **you can see for yourself what you have forgotten or not even thought about**. When people give feedback on yours they generally **just talk about what is there**. They don’t say, well I did this on mine and you could put that in yours.’*

Focus groups

- What do you think is best for learning - giving or receiving feedback?

*I think when you are reviewing...[the work of peers]...it's more a **self-learning process, you're teaching yourself**; well, I can see somebody's done that and that's a strength, and I should maybe try and incorporate that somehow into my work. Whereas **getting...[teacher]... feedback you're kind of getting told what to do**; you're getting told this is the way you should be doing it, and this is the right way to do it. You're not really thinking for yourself.... I think...[reviewing]... **would help you not need so much of teacher feedback**, if there was more of this. Whereas, I think if you're not being able to do...[reviewing]... then you will always be needing more...[teacher feedback]...*

Benefits of reviewing (3)

A new perspective on feedback

- ❑ Students **construct feedback ‘meanings’ for themselves** while they produce them for others (peers)
- ❑ **Puts feedback processes in the hands of the student**
- ❑ Students examine many examples of the same work of different quality: **learn different ways of producing quality**
- ❑ Writing feedback explanations is a **knowledge-building** process.
- ❑ Reduces need for teacher feedback
- ❑ Suggests **another focus for teacher feedback - helping students calibrate** the quality of their own judgements.

Nicol, D., Thomson, A and Breslin, C. 2014. Rethinking feedback in higher education: a peer review perspective. *Assessment and Evaluation in Higher Education*, 39(1), 102-122

Results

Would you choose to participate in a peer review exercise in the future?

<input type="checkbox"/> Yes	76.6%
<input type="checkbox"/> No	3.1%
<input type="checkbox"/> Maybe	18.8%
<input type="checkbox"/> Don't know	1.6%

Seven Principles and Peer Review

Good assessment and feedback should:

1. Clarify good performance: students generate and apply criteria simulating the behaviour of experts.
2. Facilitate reflection/self-assessment: students engage in multiple evaluative acts all linked to their own work
3. Deliver high quality feedback (to self-correct): reviewing increases feedback received: through producing feedback for others students actively create feedback on own work
4. Encourage dialogue: peer review is dialogical but this could be enhanced significantly
5. Encourage positive motivation & self esteem: peer review is motivational - students in control/not marking others
6. Provide opportunities to act on feedback: students can update own work after giving and after receiving feedback
7. Inform/shape teaching: reviews give insight into student learning: task to help calibrate their evaluative judgements

Some design decisions

1. **Target task** - draft, factual or open-ended (design, computer programme, essay, report etc)
2. **Unit for task**: individual, pair, group
3. **Unit for review**: individual, pair, group work
4. **Matching reviewers**: random, ability, topic
5. **Number of reviews**_(counteracting poor reviews)
6. **Privacy**: anonymous reviewers, reviewers known
7. **Review criteria/rubric** - not-given: guidelines: fixed format
8. **Review perspective**: disciplinary, holistic/analytic, stakeholder, reader response, contrastive
9. **Use of peer feedback**: self-review, redraft, new task
10. **Requesting/responding** to feedback
11. **Grading**: no grades, grade participation or reviews, grade self-review after peer review

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