Evaluation of pilot project: ‘Making feedback work for you’

1. Introduction

Student feedback, particularly in relation to assessed work, is a hot topic. Constraints in resourcing and student dissatisfaction with assessment feedback mean that the effectiveness of our feedback practices has never been so important (Price et al, 2010). Various initiatives over the years have focused on ways to improve levels of student engagement and satisfaction with feedback but it continues to be a challenging and key area for the Higher Education sector.

What is feedback?

According to Price et al (2010), the term ‘feedback’ disguises multiple purposes which are not often explicitly acknowledged, and roles attributed to feedback fall broadly into five categories:

1. **Correction** – putting things right
2. **Reinforcement** – of positive or negative behaviour
3. **Forensic diagnosis** – diagnosing problems
4. **Benchmarking** – identifying a gap between what is understood/has been demonstrated and the standard of performance expected
5. **Longitudinal development** – supporting improvements in subsequent work.

The popular view is that feedback must explicitly address future activity (i.e. feed forward rather than feedback), and support longitudinal development in terms of both slowly learnt literacies and understanding threshold concepts (Gibbs and Simpson 2004; Torrance 1993; Knight and York 2004, cited in Price et al 2010, p. 279).

Assessment and feedback at the University of St Andrews

Schools provide a varied mix of assessments across their programmes of study within a given discipline. The University encourages variety and innovation, as well as appropriateness with regard to credit weighting and learning outcomes. Feedback on all student work including exams is compulsory, and Schools are required to publish timeframes for its return. The University has well-developed mechanisms for lecturers and tutors to provide feedback to students on their academic work. Opportunities for informal feedback are promoted by the friendly atmosphere and relatively small size of academic schools. Formal feedback on submitted work includes formative and summative elements, the latter in the form of marks on a standardised 20-point scale.

Schools operate various procedures to monitor, review and enhance the quantity and quality of formative feedback. In addition, there are various fora for members of staff within which discussion of best practice in setting assessments and delivering feedback occurs. These include the University’s Learning and Teaching Committee (LTC); LTC Open Fora; an annual learning and teaching event; an assessment and feedback workshop for academic staff; and various School-based initiatives such as marking fayres and teaching discussion groups. CAPOD offered a feedback workshop for students in Academic Years (AYs) 2012-13 and 2013-14, however these were cancelled due to a perceived lack of interest.

Student satisfaction in relation to assessment and feedback

Two formal channels are used by the University to measure student satisfaction in the areas of assessment and feedback: End-of-module questionnaires and participation in externally-facilitated surveys for taught students. The latter comprise:

1. **The National Student Survey – NSS**; final year undergraduate (UG) students
2. **iGraduate Student Barometer – iGrad**; all registered UG and taught postgraduate (PGT) students
3. **Postgraduate Taught Experience Survey – PTES**; all registered PGT students.
Data from the three external surveys carried out during AY 2012-13 indicated that overall satisfaction remains generally high. However, two of the four themes that were identified for monitoring and action related to assessment and feedback, specifically the quality of feedback and clarity of marking criteria. Whilst not standing out from the rest of the sector, the quality of feedback was highlighted on the basis that these lower rates of satisfaction have been consistently so for a number of years, despite many Schools making proactive efforts to improve perception and manage expectations with regard to the delivery of feedback. Clarity of marking criteria was highlighted on the basis that the results were relatively low despite effort at an institutional level to improve clarity of marking criteria for students.

**Making feedback work for you: A student intervention**

In response to the need to improve student engagement and satisfaction with feedback, and to promote the provision of feedback which supports longitudinal development, an LTC open forum was dedicated to the use of feedback for learning; drawing upon an interactive workshop called ‘Making feedback work for you’ (MFWFY). This workshop forms one strand of Edinburgh Napier University's (ENU) Feedback for Learning Campaign, which began in AY 2009-10. The workshop, run by ENU’s Confident Futures team, does not cover the well-trodden territory of what constitutes well designed and delivered feedback, but instead addresses some of the key psychological aspects that affect how receptive and self-motivated a student may be to acknowledging and acting upon feedback. Please refer to Appendix A for further information on the intervention. As at the summer of 2013, over 750 students across all Schools at ENU had attended the workshop. 67% of these students found the workshop ‘very useful’ and, when asked how much the workshop will help with their studies, 79% rated it 4 or higher (on a scale of 1 – 5, with 5 being the highest score).

**Outcome of the LTC open forum**

The LTC open forum on ‘Making feedback work for you’ was attended by 53 members of academic and support staff, including Directors of Teaching and the Vice Principal (Proctor). The workshop and its key concepts were extremely well-received, and 95% of attendees advised they were likely to make a change to a process or a behaviour as a result of attending the workshop. There was strong support for implementation within the University, and nine Schools expressed an interest in offering the workshop to their students.

Further to this, a decision was taken to pilot the intervention in two Schools (Computer Science and Classics) during AY 2013-14. Co-ordinated by a project team comprising Ros Campbell (CAPOD), Erwin Lai (CAPOD) and Anne MacNab (ENU), the pilot ran from August 2013 to May 2014. Semester one involved project planning and design, and the student intervention was rolled out in the second semester. The pilot aimed to assess the viability, suitability and sustainability of the intervention for implementation across the wider University. The expected benefits of the pilot were as follows:

a) Increasing student awareness of the content and implications of their academic feedback on their performance over time
b) Broadening student perception of what constitutes feedback
c) Improving the degree to which students take personal ownership for their academic performance improvement, and deal with any set-backs they encounter
d) Encouraging students to be more action-orientated in their response to feedback
e) Motivating staff to assess and review existing feedback mechanisms and their interactions with students, in terms of promoting action-orientated responses from students.

### 2. Methodology

**Reflections from ENU**

The pilot took account of ENU’s experience and lessons learned:

a) Consistent teaching of the two key concepts – Conscious Competence and Mindsets – is critical to student understanding of and successful application of the principles to their own work
b) ENU’s approach involved face-to-face (f2f) student workshops, of 2 or 3 hours duration, integrated into a module within normal timetables, using facilitators from Confident Futures.

c) The intervention is most effective when delivered in relation to actual personal feedback from a recent assessment, preferably unseen to that point.

d) Engaging the wider staff body is important in order to reinforce and build on the impact of the session. At ENU, staff delivering on the module concerned were supportive and educated in the concepts, however staff running other modules for that year, or in subsequent semesters, had limited or no awareness. The opportunity to refresh and reinforce the concepts at future key points for students (e.g. at the beginning of a new and challenging module and when receiving feedback on a different module) could be taken if there was wider staff awareness of both the pilot itself, and the key concepts within the workshop.

Additional recommendations included linking the workshop to competencies being assessed within recent and future assessments, and providing an opportunity for students to share their experiences and lessons in improving their performance level in relation to those skills through group work.

Delivery mode

A blended learning approach was adopted for the pilot:

a) Online course: An adapted online Moodle course (designed for ENU’s distance learning students) offered potential for large numbers of students to be exposed to the material in a consistent and cost-effective way, reduced the importance of the skill set of the staff member delivering the workshop, and provided an opportunity to trial a relatively new online course. Students were asked to complete the course in their own time. In addition to the two key concepts, students were encouraged to reflect on sources of feedback; consider personal barriers to learning/using feedback; and complete a feedback action sheet drawing on ‘real’ feedback from their last assignment.

b) F2f workshop: Students were then required to attend an interactive follow-up workshop during class time. Drawing on key concepts in the online course, students worked individually and in groups to: consider skills being assessed within the assignment they had just completed; identify personal areas of strengths and weaknesses regarding these skills, share strategies and tips; reflect on feedback from their latest assignment; and begin producing a personal action plan (see sample hand-outs in Appendix B).

Implementation process

The key stages of the pilot project are summarised in figure 1 below. A more detailed overview is available in Appendix C.

<table>
<thead>
<tr>
<th>Phase 1: Planning and preparation</th>
<th>Phase 2: Student intervention</th>
<th>Phase 3: Evaluation</th>
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<tbody>
<tr>
<td>• Review of online course and minor adaptations</td>
<td>• Online course undertaken by students in own time. Uptake monitored by module leaders</td>
<td>• Staff and student focus groups</td>
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<tr>
<td>• F2f awareness session for staff in pilot schools and open session for all University staff</td>
<td>• Follow-up f2f workshop delivered by Anne MacNab from ENU (with a view to being delivered by St Andrews staff in class time if rolled out across the university).</td>
<td>• Review of student and staff feedback gathered during key stages, i.e. upon completion of awareness sessions, online course, f2f workshop, and module.</td>
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<tr>
<td>• F2f briefings for School President (SP) in pilot schools and class reps for pilot modules</td>
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<td></td>
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<tr>
<td>• Staff, SP and class rep exposure to online course</td>
<td></td>
<td></td>
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<tr>
<td>• Determining appropriate timings of online course and f2f workshop to connect with feedback from a recent assessment</td>
<td></td>
<td></td>
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<tr>
<td>• Design of f2f workshop.</td>
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Figure 1: Summary of pilot stages
School selection

As indicated previously, nine schools volunteered to take part in the pilot project following the LTC open forum. Two relatively small schools (one from the Arts; one from the Sciences) offering programmes with a high proportion of Single Honours students were deemed appropriate for a pilot, as the intervention would not run concurrently (and would therefore not be reinforced) in other schools. In addition to support from Head of School and Director of Teaching (DoT), the DoT was also required to have attended the LTC open forum. School commitments for AY 2013-14 were also taken into consideration to avoid overburdening members of staff. It should be noted that the 2013 NSS scores related to feedback at school level were not taken into account. Following reflection on the above criteria and discussion with the Vice Principal (Proctor), the Schools of Computer Science and Classics were selected to participate in the pilot.

Pilot structure and logistics

A summary of the pilot structure is provided in table 1 below.

<table>
<thead>
<tr>
<th>Pilot module</th>
<th>School of Computer Science (CS)</th>
<th>School of Classics</th>
</tr>
</thead>
<tbody>
<tr>
<td>Module</td>
<td>CS1003: Programming with Data</td>
<td>CL2003: Early Greek Poetry and Philosophy</td>
</tr>
<tr>
<td>Student year</td>
<td>Year 1</td>
<td>Year 2</td>
</tr>
<tr>
<td>Module info</td>
<td>New module, designed by Graham</td>
<td>Established module</td>
</tr>
<tr>
<td></td>
<td>Kirby and Steve Linton</td>
<td></td>
</tr>
<tr>
<td>Number</td>
<td>66</td>
<td>44</td>
</tr>
<tr>
<td>Time</td>
<td>Semester 2, AY 2013-14</td>
<td>Semester 2, AY 2013-14</td>
</tr>
<tr>
<td>Staff contacts</td>
<td>Head of School: Steve Linton</td>
<td>Director of Teaching: Ralph Anderson</td>
</tr>
<tr>
<td></td>
<td>Module Co-ordinator: Graeme Kirby</td>
<td>Module Co-ordinator: Alex Long</td>
</tr>
<tr>
<td>Assessment</td>
<td>Fortnightly submission of computer</td>
<td>2 x essays (first on Poetry; second on</td>
</tr>
<tr>
<td></td>
<td>program and report designed to</td>
<td>Philosophy)</td>
</tr>
<tr>
<td></td>
<td>address specific scenario</td>
<td></td>
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</tbody>
</table>
| Staff        | 20 Jan 2014, 1430-1630           | School opted not to | session
| awareness     | 18 CS staff members              | hold session; Module Co-ordinator plus 2 colleagues attended |
| session       |                                | session for CS staff |
|                |                                |                    |
| SP and class  | Meeting with SP and class reps   | Email contact with |
| rep briefing  | in January 2014                  | SP and class reps in |
|              |                                | January 2014       |
| Online course | Weeks 3-5 (10 - 28 Feb 2014)    |                        |
|              | 43 (66%)                        | Week 7-8 (10 March - 4 April 2014)* |
|              | 18 (41%)                        | 18 (41%)            |
| Face-to-face | Duration 2 hours                | 1 hour              |
| workshop     | Dates**                         | Week 8 (3 and 4 April 2014) |
|              | 60 (91%)                        | 39 (89%)            |
| Pilot        | Online course 43 students (65%) | 18 students (41%)   |
| feedback     | 61 students (92%)               | 37 students (84%)   |
|              | 1 student (School President)    | Not held due to timing issues; email issued |
|              | 4 teaching staff                | Module co-ordinator provided feedback via email |

Table 1: Summary of pilot structure

* Included a 2-week spring break.
** Students were required to attend one workshop; selecting one of two available dates.
Points to note:

a) **Selection of modules:** Core modules were selected to allow for coverage of an entire year student group via one module. Classics later requested to pilot the intervention in a different module (CL2003) due to timetabling constraints in AN2003 (Mediterranean Communities).

b) **Staff awareness sessions:** The intention was to hold a staff awareness session in each School in light of ENU’s recommendation. However, Classics took the decision not to offer a session, and instead those involved in the pilot module attended the session for CS.

c) **Briefings for assessment markers:** Markers providing the assessment feedback being used as part of the pilot were briefed in person and via an instruction document.

d) **Scheduling of Moodle release and workshops:** These were timed to be available to students over a 2-week period between the submission of an assessment and the provision of associated feedback.

e) **Adaptation of the ENU Moodle online course:** The student and staff videos were replaced with St Andrews staff and students, and a more extensive survey was incorporated into ENU’s existing course to capture students’ views on the course.

f) **Duration of workshops:** 2-hour workshops were held for CS students, as new unseen feedback was issued during the session. Classics opted for 1-hour workshops, as it was agreed that students would benefit from additional time for reflection on the feedback from their poetry assessment prior to the workshop.

g) **Reinforcement:** The group work outputs (e.g. ideas on how to become more competent at skills being assessed in their latest assignment and potential blockages) were circulated to students after the workshop via email.

3. **Results**

Below is a summary of feedback gathered upon completion of the key stages of the pilot, i.e. the staff awareness sessions, the online course, the f2f workshops and the module. A more comprehensive overview, which includes some detail behind the key messages, is available in Appendix D.

**Staff awareness sessions**

Both schools involved those teaching on the pilot modules in the staff awareness sessions. Computer Science also encouraged other teaching staff in the school to attend. Those with teaching responsibilities for Classics’ pilot module CL2003 opted to attend the session organised for Computer Science, which was held during the inter-semester break at the request of Computer Science. The staff awareness session open to all University staff was held on the same day as the session for pilot Schools. The key messages which emerged from the feedback forms issued at the end of the sessions were as follows:

a) Overall, both sessions were well-received

b) 79% of participants from the pilot session were very likely or likely to make a change to a process/behaviour as a result of attending the session but some felt there should have been greater clarity with respect to the session’s objectives

c) 100% of participants from the open session were very likely or likely to make a change to a process/behaviour as a result of attending, and there was an appetite for wider implementation of this intervention.

| “Excellent event, very useful!” |
| “A mindset ‘champion’ could visit Schools and review their different needs and challenges” |
| “I will consider incorporating some of the thinking into tutorials and modules”. |
Online course

Upon conclusion of the online course, students were asked to complete an online survey. Key messages emerging from the feedback were as follows:

a) 61% of students felt the online course should be made available to all students in the University
b) Overall, the online course was more favourably received by the Classics students than by the CS students
c) Responses to the online course were polarised
d) There was broad support for making the course available to all students in the University
e) The online course had a positive impact on a significant number of students (but not everyone saw the relevance/benefits)
f) The time taken to complete the course varied between students and schools
g) There is scope for development to increase the course’s impact/success.

F2f workshops

It is worth highlighting some of the differences between the Classics and Computer Science workshops, as these may have affected the responses provided in the paper-based questionnaires, and consequently the key messages overleaf. These include:

a) Audience: Second year Classics students versus first year Computer Science students. Anecdotal feedback from ENU has identified semester 2 of year 2 as the optimum position for the workshop, as a support for the transition to the demands of Sub-Honours study
b) Workshop duration: 1 hour for Classics versus 2 hours for Computer Science
c) Timing of the issuing of feedback on the student’s last assignment for use during the workshop: Issued to Classics students in advance to enable reflection and issued to Computer Science students during the workshop without the grade
d) Workshop venues: Sessions for Computer Science were held in the school, whereas Classics’ sessions were held out-with the school, which caused some confusion.

Key messages emerging from the f2f workshops were as follows:

a) The vast majority of students (88%) felt the workshop should be made available to all students in the University
b) Classics students found the workshop more worthwhile than CS students and, overall, students from both schools found the workshop more worthwhile than the online course
c) The workshop was more effective than the online course at informing students on how to make the most of the feedback they receive
d) The workshop was viewed as being much more relevant to students’ studies and development than the online course
e) A significant number of students (60% of CS students and 69% of Classics students) felt the workshop will help them in their studies
f) The vast majority of students found the group work helpful
g) The workshop had a very positive impact on a significant number of students (but like the online course, not everyone saw the relevance/benefits).
End of module

Key messages emerging from multiple choice questionnaires (MEQs), focus groups and email feedback were as follows:

a) Two thirds (61%) of Classics students and one third (32%) of CS students found the intervention helpful. Recurring free text comments in the MEQs were:

“It changed the way I view feedback... I pay much closer attention to it now”.
“I gained new ideas on how to improve and gain confidence in the methods I was already using”.
“It was tedious and unhelpful”.

b) Overall, the f2f workshops were much more useful than the online course. However, some students appreciated the two-fold approach to the intervention:

“Having both an online course and an interactive session is greatly important. The former allows you an opportunity to do it in your own time and think about the things you think are important; while the latter helps you see how others cope with feedback and brings to the surface the communicating about feedback that is required to process it”. (CS student)

c) CS students perceived an improvement in the level and quality of feedback received (although the school confirmed the feedback was in line with their standard provision):

“The feedback we received for the feedback session was really fantastic, as there was so much more than usual (although some people thought that it was too negative) and everyone received broadly the same amount of feedback. People are really hoping this carries on”. (Minutes, CS SSCC meeting, 10-3-14)

d) Module Coordinators expressed value in the activities focusing on reflection, articulation, planning and peer discussion:

“The real value of the process probably lies in getting students to articulate where they can most improve. It was a very good thing to get them to talk to one another about their own academic practice”. (CL2003 Module Coordinator, Classics)

“Overall, the most valuable part of the process appears to have been the specific activity reflecting on feedback received, and planning future actions based on it”. (CS1003 Module Coordinator, Computer Science)

e) There was no significant increase in average marks for the students’ second assignment in the pilot module:

“Students did better in their second essay (average: 13.98) than the first (13.14). It’s likely then that some really benefited from the workshop”. (CL2003 Module Coordinator, Classics).

“There was no clear difference in the average mark for the assignment following the f2f workshop. Following the pilot, the specifications of the remaining assignments were amended to include a requirement for students to identify a specific item of feedback from their previous assignment, and to explain how they had acted on it in the current assignment. This appears to have been useful for some students”. (CS1003 Module Coordinator, Computer Science)
f) Module Coordinators expressed concern about rolling out this intervention in its current format, and making it compulsory:

“*The workshops have most value for students who are committed but struggling. If the students respond favourably in their feedback, perhaps in the future the University could provide optional workshops, aimed specifically at this kind of student*”. (CL2003 Module Coordinator, Classics)

“*Some students appear to have disliked the compulsory nature of the activity. Making it optional, of course, would risk missing those students who would most benefit from it. There are elements of the pilot that the school would like to take forward, though not necessarily in the same format. This might include other levels of study. Given the experience with the online part, we are unsure as to the usefulness of a University-wide scheme*”. (CS1003 Module Coordinator, Computer Science)

4. Conclusions and recommendations

This pilot project yielded useful results and important lessons. In terms of the original expected benefits of our intervention (listed on page 2), these were all met to some degree (see Appendix E). Overall, the intervention appeared to be of benefit to a majority of students in both pilot schools. Both the online course and f2f workshops had some positive impact on the student cohorts involved in the pilot, with the f2f workshops reviewing far more positively than the online course. However, as the f2f workshops were delivered after the online course, it is difficult to know if (and how much) the knowledge from the online course contributed to the effectiveness of the f2f workshops.

Based on numbers alone, there are indications that the intervention should be considered for wider roll-out across the University, although it must be noted that support for this was less apparent for the online course (only 60%), compared with the f2f workshop (88%). Any decision to roll-out should not be taken lightly, as there will be significant resource implications (primarily staff time) and we recommend some form of consultation with schools across the University.

The following considerations and lessons learned should be taken into account, when considering if and how a roll-out should be carried out across the University:

<table>
<thead>
<tr>
<th>Key area</th>
<th>Notes</th>
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<tbody>
<tr>
<td><strong>Online course</strong></td>
<td>The online course component needs further development, taking into account St Andrews staff and student feedback. ENU is producing an improved and streamlined ‘white label’ version of the Moodle course in line with this feedback, which will allow completion within 30 minutes. It will be available for use at St Andrews, and can be tailored further for our students. One of the key areas for development is the ‘Resources’ section, e.g. with online academic skills-related information and advice.</td>
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<tr>
<td><strong>Buy-in and support from schools</strong></td>
<td>It is crucial to get buy-in from staff in schools, and from Class Reps and School Presidents. Engagement with staff and key student representatives should occur at the earliest opportunity. Buy-in should not remain merely at senior management level (with Head of School, and DoT), but effort should be made to engage with other staff through awareness sessions for all colleagues within schools. Staff engagement sessions and tutorial briefing sessions (for staff involved in modules where intervention will occur) should be carried out separately to avoid overlap of material and possible confusion.</td>
</tr>
<tr>
<td><strong>Reinforcement</strong></td>
<td>One of the key ways to maximise the impact of the intervention is to ensure the concepts are reinforced. This includes reinforcement for students (e.g. in subsequent modules/assignments in future years), and for staff (e.g. after the f2f workshop). Consideration needs to be made on where, when and how to reinforce these concepts and principles with staff and students. One of the most positive outputs of the intervention was the group work posters and tablemats containing ideas on how to become more competent at skills being assessed in students’ latest assignment and how to tackle potential blockages. Aside from circulating these to students, there</td>
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could be a follow-up or recap (e.g. at the start of the next tutorial) in order to update/refresh participants and to illustrate how these ideas can feed forward into the next assignment (where some of the same skills were being assessed). To make this more robust, the skills assessed in subsequent assessments need to be as closely aligned as possible and clear, obvious and conscious linkages need to be made between assessments and modules.

Another potential area of reinforcement is in highlighting the academic underpinning of this intervention, to help to negate the pop psychology perception amongst staff and students. Changes could include updating the terminology used, (e.g. entity and incremental instead of fixed and growth mindsets), and updating examples used so they are less simple and generic.

<table>
<thead>
<tr>
<th>Phased approach</th>
<th>Consideration needs to be made, in the event of a roll-out, on whether this will be phased (selected schools, and in stages) or whether every school will be included in one stage. If a phased approach is selected, we recommend reviewing student perceptions of the quality and standards of current provision as a criterion for selection, e.g. drawing on the NSS scores related to assessment feedback. ENU found that implementation on a module-by-module basis is not as effective as a programme-led approach; feedback should feed forward into future assessment and modules, and programmes of study should be considered.</th>
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</table>
| Resource implications and effort required | There was a significant investment of CAPOD time in this pilot, and it is anticipated this would also be the case for a University-wide roll-out (in terms of planning, coordination, delivery, evaluation, advice, follow-up, etc). The expectations for academic and support staff involved in a roll-out should be managed, as time will be required for:  
  - discussion and decision making, i.e. on where and how to integrate intervention into selected module(s). This needs to be planned and timetabled at the start of the semester to ensure integration and to avoid a perception that the intervention is a ‘bolt-on’  
  - Increased focus/reference to skills/competencies needs to be made by academics both during modules and in provision of feedback. There may be an impact upon staff marking assessments (in terms of trying to address inconsistencies in quality of markers). |
| Associated resources (that need to be made available) | Drawing on the pilot feedback, we would recommend the production and inclusion of the following resources to accompany the intervention:  
  - Resource(s) to help people to move from a Fixed to a Growth mindset. This could be drawn from Dweck’s material on how to support moving to a Growth mindset; expounding on the following steps: knowing about it, catching yourself doing it, and challenging yourself.  
  - Resource(s) for academic staff on how to give growth-oriented and high quality feedback. This would highlight a set of principles, e.g. linked to action and competencies. This resource could be disseminated by, and its implementation encouraged and monitored by, the school’s Director of Teaching.  
    ENU uses a paper-based workbook for its f2f sessions. We may want to consider producing something similar. |
| Intervention format for roll-out | If a roll-out across the University were to mimic what was offered on the pilot, then conceivably individual Schools could be given the following options on what format(s) the intervention will take, and the expected average time a student would take to participate in the intervention:  
  - Option 1: Online course (time per student: 0.5 – 1 hour)  
  - Option 2: Online course plus 1-hour workshop (time per student: 1.5 – 2 hours)  
  - Option 3: Online course plus 2-hour workshop (time per student: 2.5 – 3 hours)  
  - Option 4: 1 – 2 hour workshop (time per student: 1 – 2 hours)  
  
  Based on the pilot, we would recommend workshop design (1 or 2 hours) be carried out in collaboration with CAPOD and the workshops could be delivered by academic staff or CAPOD. The introduction of real and previously unseen feedback could be either at the close of the online course or during the workshop (suitable only with the 2 hour version). |
There are opportunities to embed the key concepts of the intervention in various existing (and planned) activities within the University. A number of possibilities include:

- A link from the TGAP course to a web landing page about feedback including a link to the online course (in agreement and collaboration with the Pro Dean [Taught Postgraduate])
- Bespoke workshops for School Presidents and Class Reps (in collaboration with the Head of Student Development [HoSD])
- Integration with:
  - the Academic Skills roll-out project (in collaboration with HoSD)
  - orientation week (in collaboration with the HoSD)
  - student leadership programmes, e.g. Saints Leaders programme (in collaboration with the HoSD)
  - the Professional Skills Curriculum (in collaboration with the HoSD)
  - the Academic Staff Development Programme (in collaboration with the Academic Staff Developer)
  - Introduction to Tutoring and Assessment (in collaboration with and Educational and PG Researcher Developer)
- Reviewing, revising and possibly combining existing assessment and feedback policies
- Creation of a toolkit for students and staff.

School staff should be given the opportunity to select the most appropriate time to locate the intervention. Our impression from the pilot is that the year 2 students were more receptive to, and appeared to benefit more, from the pilot than their year 1 contemporaries. However, following the experience with year 1 in Computer Science and year 2 in Classics, it is clear that there are advantages and disadvantages to each (see Appendix F).

Careful consideration should be made on the merits of making the intervention compulsory or optional – anecdotally both module coordinators from both schools expressed concern about students’ reactions if this was to be made compulsory across the University. On the other hand, if this was optional, there is every possibility that the students who would benefit most may not opt to attend or participate in the intervention.

Anecdotal feedback was mixed in terms of the usefulness of having academic staff in attendance at the f2f workshop. Our impressions are that it would be very helpful to have academic staff with discipline-specific knowledge present to facilitate the group work. It was suggested that PG tutors could be helpfully deployed as an addition or alternative to academic staff.

One unexpected outcome of this intervention could be a negative impact on the NSS scores, due to raising students’ awareness of, and expectations relating to, feedback (especially if these expectations are too high or are not met). In the School of Computer Science, some students exhibited unnecessarily demanding behaviour related to having a fixed mindset (questioning grades given), which appeared to aggravate their marker.

References


Price, M. P., Handley, K., Millar, J., & O’Donovan, B. (2010). Feedback: all that effort, but what is the effect?

Ros Campbell, CAPOD, University of St Andrews
Erwin Lai, CAPOD, University of St Andrews
Anne MacNab, Edinburgh Napier University
Appendix A: Further information on ‘Making feedback work for you’

The intervention is based upon the following three principles:

1. Students are given models to encourage them to explore the attitudes they bring to their experience of receiving feedback
2. The concepts involved are not complex, but awareness can be powerful for some
3. This process for approaching feedback is transferable, and can be used on an ongoing basis to improve skills and results in modules, and in wider life.

The intervention draws on two key concepts:

1. **The Conscious Competence Matrix**

   Adapted from Howell (1982), the Conscious Competence matrix describes a four step journey to becoming accomplished at any skill. The key concepts highlighted to students are that:
   
   - awareness of what ‘competence’ consists of is critical, i.e. a clear understanding of learning outcomes and marking criteria
   - it is normal for students to be at different points on the journey for different skills
   - effort that is efficiently targeted through effective feedback is key to success on the journey.

   ![Conscious Competence Matrix](image)

2. **Growth (incremental) versus Fixed (entity) Mindset**

   Mindset is situational and is your view of your ability to do a particular thing (Mangels et al, 2008). A Fixed mindset believes that ability is ‘set’ (whether high, medium or low) and unlikely to change over time. This attitude promotes the setting of personal goals that are performance (rather than learning) oriented, which in turn discourages attention to feedback and effort, and over time promotes helplessness. Adopting a growth mindset requires a belief that ability is malleable, i.e. can improve or worsen over time. This attitude promotes the setting of learning-based personal goals, which in turn promotes attention to feedback and targeted effort to develop and improve skills, promoting perseverance over time.

   Table 1 overleaf summarises corresponding attitudes and actions in relation to these two mindsets.
### Table 1: Attitudes and actions in relation to mindset

<table>
<thead>
<tr>
<th></th>
<th>FIXED Ability is fixed. Performance related goals</th>
<th>SITUATION</th>
<th>GROWTH Ability is malleable. Learning related goals</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ignore or resist (potentially useful) feedback</td>
<td>FEEDBACK</td>
<td>Opportunity to learn and improve</td>
<td></td>
</tr>
<tr>
<td>Not required by intelligent people</td>
<td>EFFORT</td>
<td>The way to achieve success</td>
<td></td>
</tr>
<tr>
<td>Evidence of poor capability</td>
<td>SETBACKS</td>
<td>Necessary path to learning</td>
<td></td>
</tr>
<tr>
<td>Avoid, in case of poor performance or failure</td>
<td>CHALLENGES</td>
<td>Embrace; opportunity to learn and improve</td>
<td></td>
</tr>
<tr>
<td>Threatened or demotivated</td>
<td>SUCCESS OF OTHERS</td>
<td>Inspired by, and learns from, others</td>
<td></td>
</tr>
</tbody>
</table>
Appendix B: Sample hand-outs used during f2f workshops

My feedback from CS1003 Practical 1: File Processing

Enter one example of both positive and critical feedback you have received.

<table>
<thead>
<tr>
<th>Positive feedback</th>
<th>Critical feedback</th>
</tr>
</thead>
<tbody>
<tr>
<td>In my own words what is it telling me?</td>
<td>In my own words what is it telling me?</td>
</tr>
<tr>
<td>Have I had this feedback before?</td>
<td>Have I had this feedback before?</td>
</tr>
<tr>
<td>Where can I find out how to improve upon this?</td>
<td>Where can I find out how to improve upon this?</td>
</tr>
<tr>
<td>What specific action am I going to take to maintain this?</td>
<td>What specific action am I going to take to address this?</td>
</tr>
</tbody>
</table>

CS1003 Programming with Files

Become competent in developing robust software to manipulate data stored in files.

Key skills:
- choosing appropriate way to represent data in memory
- choosing appropriate classes and methods from file API
- identifying and dealing with possible error conditions
- testing
- debugging
- writing clear, tidy, consistent and understandable code
### UNSTUCK / LEARNING STRATEGIES

#### Strategy of Approach | Learning Strategy
--- | ---
Learn from other people | Discuss
  - Learn from and with peers
  - Listen to lecturer
  - Get help from another person
Learn from Tools or written materials | Read
  - Use a tool
Get and follow step-by-step instructions | Source and follow step by step instructions

#### Personal discipline | Remember things
- Be persistent / don’t stop / don’t give up
- Avoid the problem / find a work around
- Walk away and come back later
- Reflect / sit and think

#### Gain experience | Write a draft
- Learn by trial and error
- Learn from your mistakes
- Practice

#### Visualise | Visualise / look at a diagram
- Draw a diagram or picture
- Connect diagrams

#### Learn from examples | Use related examples
- Use specific examples
- Use sequence of examples of increasing complexity

#### Trace | Trace over a diagram or picture

### Divide and Conquer | Break into parts
- Use incremental approach

### Relate to real world | Model the real world
- Use analogy to the real world

### Take a bird’s eye view | See context / reason for something
- See the larger picture
- See patterns

### Make transfers/connections | Relate to something already learned
- Related to anything else

---

Appendix C: Implementation process outline

Criteria
- Not recommended earlier than S2 of year 1
- Positioned between two assessments, ideally with some overlap of assessment criteria
- Check for potential overlap with other routes.

Requirements
- 2 week online course completion window
- 1 or 2 hour tutorial slot for f2f workshop
- Agree process for provision and use of feedback (for use in online action plan and/or f2f workshop)
- Update Module Handbook.

Arrangements
- Prior to submission, identify and highlight key skills being assessed to students
- Provide feedback against those skills
- Provide feedback either before (1hr) or during (2hr) f2f workshop.

Students
- Undertake online course
- Action plan either on prior submission OR on Assessment (a) feedback.

Academics
- Enable access to on-line course (module specific)
- Generate growth mindset orientated feedback for Assessment (a) against specific skills being assessed
- Make feedback available to students either before or during face to face workshop
- Monitor student completion of online course.

Process
- Remind students to bring completed Action Plan
- Deliver 50 min or 1 hr 50min predesigned tutorial
- Output is Peer generated and supported feedback related improvement ideas, intended as input to Assessment (b).

Arrangements
- Prior to submission, remind students of overlaps and consistencies between assessments (a) & (b)
- Remind students of the value of applying a growth mindset, and of setting ‘learning’ (not just ‘performance’) related goals
- Provide growth mindset promoting feedback against all skills within the assessment.

Key areas
- Monitor student progress on overlapping skills between assessments (a) & (b)
- Monitor student attitudes to feedback generally.
Appendix D: Staff and student feedback on ‘Making feedback work for you’ intervention

Table 1: Key messages from staff awareness sessions

<table>
<thead>
<tr>
<th>Staff awareness session for pilot schools</th>
<th>Key messages</th>
<th>Examples/additional information</th>
</tr>
</thead>
<tbody>
<tr>
<td>Overall, the session was well-received</td>
<td>The majority of participants found the mindset and conscious competence theories useful</td>
<td></td>
</tr>
<tr>
<td>79% of participants very likely or likely to make a change to a process/behaviour as a result of attending the session</td>
<td>Examples included reflecting on feedback provided, aiming to provide growth-orientated feedback, and encouraging a growth mindset</td>
<td></td>
</tr>
<tr>
<td>Some participants felt there should have been greater clarity with respect to the session’s objectives</td>
<td>It was unclear to some whether the session was on the intervention or implementation process. There was some repetition for those who had attended the open forum/accessed the online course</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Open session for all University staff</th>
<th>Key messages</th>
<th>Examples/additional information</th>
</tr>
</thead>
</table>
| 100% of participants very likely or likely to make a change (to a process/behaviour) as a result of attending | • “[I will consider] incorporating some of the thinking into tutorials/ modules”  
• “[I will consider] introducing the key concepts during orientation week” |
| There was an appetite for wider implementation of this intervention | • “Excellent event, very useful!”  
• “A mindset ‘champion’ could visit Schools and review their different needs and challenges”  
• “It would be useful to do a combined staff/student event” |

Table 2: Student feedback on the online course

<table>
<thead>
<tr>
<th>Key messages</th>
<th>Examples/additional information</th>
</tr>
</thead>
</table>
| Overall, the online course was more favourably received by the Classics students | • 72% of Classics students thought it was well structured compared to 49% of CS students  
• 56% of Classics students and 35% of CS students felt better informed about how to make the most of the feedback they receive |
| Responses to the online course were polarised | • 43% of all students felt it was relevant to their studies and personal development; 41% of students did not; 16% were neutral  
• 55% of all students thought it was not worthwhile in its current format |
| There was broad support for making the course available to all students in the University | 60% of all students thought the online course should be made available to all students in the University |
| The online course had a positive impact on a significant number of students (but not everyone saw the relevance/benefits) | • “I’m more likely to consult with peers for extra ideas and feedback”  
• “I plan to put more time into reviewing feedback, particularly negative feedback, which until now I was often very dismissive of”  
• “I will really think about the feedback, view it positively and think about how I can improve in weaker areas”  
• “Not much. I’ve got a fixed mindset when it comes to school and my performance is unwaveringly good” |
| The time taken to complete the course varied between students and schools | • 56% of Classics students took < 1 hour compared to 33% of CS students  
• 33% of Classics students and 56% of CS students took 1-2 hours  
• Some felt the online course took them too long |
| There is scope for development to increase the course’s impact/success | Suggestions included:  
• Streamlining course content including number/length of videos  
• Making the videos more engaging and the activities less patronising  
• Including practical advice on how to be more growth-orientated  
• Tailoring the course to the students’ chosen subject/programme  
• Removing technical issues wherever possible |
### Table 3: Student feedback on f2f workshops

<table>
<thead>
<tr>
<th>Key messages</th>
<th>Examples/additional information</th>
</tr>
</thead>
<tbody>
<tr>
<td>The vast majority of students felt the workshop should be made available to all students in the University</td>
<td>This is one of the few categories where CS rated the intervention more highly: 90% of CS students and 84% of Classics (or 88% of all students) agree or slightly agree</td>
</tr>
<tr>
<td>Classics students found the workshop more worthwhile than CS students and, overall, students from both schools found the workshop more worthwhile than the online course</td>
<td>47% of CS students and 74% of Classics students agreed or slightly agreed that the workshop was worthwhile (as compared to 30% and 50% following the online course)</td>
</tr>
<tr>
<td>The workshop appeared to be more effective than the online course at informing students on how to make the most of the feedback they receive</td>
<td>53% of CS students and 76% of Classics students agreed or slightly agreed that the workshop made them feel better informed about how to make the most of the feedback they receive (as compared to 35% and 56% of students following the online course)</td>
</tr>
<tr>
<td>The workshop was viewed as being much more relevant to students’ studies and development than the online course</td>
<td>65% of CS students and 79% of Classics students agreed or slightly agreed that the workshop was relevant to their studies and development (as compared to 40% and 50% following the online course)</td>
</tr>
<tr>
<td>A significant number of students felt the workshop will help them in their studies</td>
<td>60% of CS students and 69% of Classics students reported that what they have learned will help with their studies</td>
</tr>
<tr>
<td>Students found the group work helpful*</td>
<td>69% of CS students and 81% of Classics students found the group work helpful</td>
</tr>
</tbody>
</table>
| The workshop had a very positive impact on a significant number of students (but not everyone saw the relevance/benefits) | • “I will start taking feedback more seriously”  
  • “I will analyse feedback more carefully and use some tactics discussed in groups to improve my skills”  
  • “A lot of students feel pressurised by grades and don’t pay attention to comments on their work”  
  • “I was pleasantly surprised by how thought-provoking it was and would like others to have this experience”  
  • “It’s fairly pointless”                                                                                                                                 |

* In terms of clarifying understanding of skills and marking criteria relevant to the assessment; reflecting upon academic feedback; sharing strategies and tips in relation to skills being assessed.

**Note:** The following scale was used in the questionnaire: Agree, slightly agree, neutral, slightly disagree, disagree. Agree and slightly agree responses were amalgamated, as were disagree and slightly disagree. Neutral responses were not included.
Table 4: Feedback from MEQs, focus groups and email feedback

<table>
<thead>
<tr>
<th>Key messages</th>
<th>Examples/additional information</th>
</tr>
</thead>
</table>
| **Two thirds of Classics students and one third of CS students found the intervention helpful** | • 61% of Classics students and 32% of CS students felt the online course and f2f workshop had been of benefit. (It is worth noting that Classics students were asked to provide a yes or no response, whereas CS students were given a 1-5 [definite yes – definite no] scale. 30% of CS students gave a neutral response)  
• It is also worth noting that the CS students received the workshop in year 1, and the Classics in year 2. Anecdotal feedback from ENU has identified semester 2 of year 2 as the optimum position for the workshop, as a support for the transition to the demands of Sub-Honours study  
• “I changed the way I view feedback...I pay much closer attention to it now”  
• “It was tedious and unhelpful”  
• “I gained new ideas on how to improve and gain confidence in the methods I was already using. The course was subject specific; I found this a great benefit, as I could relate my actual feedback to what we were presented” |
| **Overall, the f2f workshops were much more useful than the online course**    | • Students’ free text comments in the MEQs and feedback from staff reinforced the view that the f2f workshops were much more useful  
• Student feedback indicated that both the online and f2f material could have been delivered more concisely  
• However, some students liked both elements, e.g. “Having both an online course and an interactive session is greatly important. The former allows you an opportunity to do it in your own time and think about the things you think are important; while the latter helps you see how others cope with feedback and brings to the surface the communicating about feedback that it requires to process it” (CS student) |
| **Module Coordinators expressed value in the activities focusing on reflection, articulation, planning and peer discussion** | • CS1003 Module Coordinator: “Overall, the most valuable part of the process appears to have been the specific activity reflecting on feedback received, and planning future actions based on it. One problem with this, which could be rectified in a future delivery, was a rather loose match between the skills assessed in the two assignments”  
• CL2003 Module Coordinator: “The real value of the process probably lies in getting the students to articulate where they can most improve. I think it was a very good thing to get them to talk to one another about their own academic practice - I hope they will continue to do so” |
| **There was no significant increase in average marks for the students’ second assignment in the pilot module** | • In CS, there was no clear difference in the average mark for the assignment following the f2f workshop  
• Classics students did better in their second essay (average: 13.98) than the first (13.14). The Module Coordinator indicated that it’s therefore “likely that some really benefited from the workshop” |
| **CS students perceived an improvement in the level and quality of feedback received** | Minutes from the CS SSCC meeting held on 10-03-14 indicated that “The feedback we received for the feedback session was really fantastic as there was so much more than usual (although some people thought that it was too negative) and everyone received broadly the same amount of feedback. People are really hoping this carries on and isn't just for the one week” |
| **Module Coordinators expressed concern about rolling out this intervention in its current format, and making it compulsory** | CL2003 Module Coordinator: “The workshops have most value for students who are committed but struggling. If the students respond favourably in their feedback, perhaps in the future the University could provide optional workshops, aimed specifically at this kind of student”  
CS1003 Module Coordinator: “Some students appear to have disliked the compulsory nature of the activity. Making it optional, of course, would risk missing those students who would most benefit from it. There are elements of the pilot that the school would like to take forward, though not necessarily in the same format. This might include other levels of study. Given the experience with the online part, we are unsure as to the usefulness of a University-wide scheme” |
### Appendix E: Benefits of ‘Making feedback work for you’ intervention

<table>
<thead>
<tr>
<th>Expected benefit</th>
<th>Comment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Increasing student awareness of the content and implications of their academic feedback on their performance over time.</td>
<td>Student feedback supports the conclusion that some but not all participants will have increased awareness. Reinforcement by staff at key points will be required to build upon this start.</td>
</tr>
<tr>
<td>Broadening student perception of what constitutes feedback.</td>
<td>During the pilot this will have been limited by the focus upon a specific assessment. Staff now have the opportunity to highlight and to build upon the wider appreciation of what constitutes feedback.</td>
</tr>
<tr>
<td>Improving the degree to which students take personal ownership for their academic performance improvement, and deal with any setbacks they encounter.</td>
<td>The Classics students did show an improvement in grades at the next assignment, which the academic staff member surmised indicated the positive impact of the intervention. Regular reminder of the implications of Mindset may be required to support students when they reach a set-back or personal threshold for the first time.</td>
</tr>
<tr>
<td>Encouraging students to be more action orientated in their response to feedback.</td>
<td>The construct of the f2f workshops was successful in promoting this approach and in motivating students to work with and learn from each other – within a growth mindset context. The workshop was more effective than the online course at informing students how to make the most of the feedback they receive (53% of CS students and 76% of Classics students agreed or slightly agreed that the workshop made them feel better informed about how to make the most of the feedback they receive, as compared to 35% and 56% of students following the online course). In 2014-15, CS is considering adding requirement to 1st level assignments for students to explain what they did differently in response to an item of feedback on the previous assignment.</td>
</tr>
<tr>
<td>Motivating staff to assess and review existing feedback mechanisms and their interactions with students, in terms of promoting action orientated responses from students.</td>
<td>CS staff reviewed their mechanisms as a direct result of the session. In addition, Classics students commented on the high quality of the feedback comments given for the relevant assignment. Again this would require to be sustained and improved, in partnership with input from students.</td>
</tr>
<tr>
<td>All of the above should positively impact the feedback related section of the National Student Survey results in the medium to long term.</td>
<td>Time will tell. In addition one effect of the intervention is that it raises students’ awareness of, and expectations relating to, feedback. One hypothesis is that this may have a negative impact on scores, in the event that those expectations are too high, and/or are not met. This may also link with the current focus upon feedback mentioned in the introductory paragraph of this report.</td>
</tr>
</tbody>
</table>

An additional side benefit was one of the activities in the CS workshop highlighted to CS staff a particular area of competence that none of the students felt confident in.
## Appendix F: Positioning of ‘Making feedback work for you’ intervention

<table>
<thead>
<tr>
<th>Advantages</th>
<th>Disadvantages</th>
<th>Advantages</th>
<th>Disadvantages</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sets expectations around feedback</td>
<td>May be too early – students have not had much experience of University as a learning environment and this may limit their ability to self-reflect</td>
<td>Students have adequate experience of the types of feedback and, more importantly, their own reaction to it</td>
<td>Students who benefit could have benefited 12 to 18 months earlier</td>
</tr>
<tr>
<td>Adoption of a growth mindset may support students in tackling challenges of University</td>
<td>May be too early – students have not had much experience of the University’s approach and feedback</td>
<td>It can support students in planning for the increased demands in volume and type of workload between 2nd and 3rd year</td>
<td>It is another intervention to ‘fit into’ crowded teaching schedules</td>
</tr>
<tr>
<td>May counter any tendency for University experience to promote a fixed mindset</td>
<td>Most able students may not yet have reached the ‘threshold’ at which their talent no longer suffices and a fixed mindset becomes a problem</td>
<td>The most able students may have reached or be close to reaching the ‘threshold’ at which their talent no longer suffices and a fixed mindset becomes a problem</td>
<td></td>
</tr>
</tbody>
</table>