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TYSTYSTYGGRIF UWCHRADDDEDIG ADDYSGU MEWN ADDYSG UWCH

POSTGRADUATE CERTIFICATE IN TEACHING IN HIGHER EDUCATION

Cylch Dysgu 2 | Teaching Cycle 2

Summative Feedback - Giving Meaning to Marks

Mae’r Cylch Dysgu hwn o’r portffolio TUAAU wedi’i gyflwyno i CADAIR gyda chaniatâd yr awdur uchod. Adnodd i’w ddefnyddio gan ymgeiswyr y TUAAU yn y dyfodol a staff eraill ydyw, fel rhan o’u datblygu proffesiynol ym Mhrifysgol Aberystwyth. Erys yn ei ddo i’r awdur a Phrifysgol Aberystwyth. Os hoffech dyfynnu’r gwaith hwn neu gyfeirio ato, cysylltwch â’r awdur. Cei'r y manlylion cyswllt yr http://www.aber.ac.uk/cy/directory/

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"Summative feedback = giving meaning to marks"

The Teaching Situation

The first year of most degree schemes in the biological sciences at Aberystwyth University are very similar, allowing students to swap between schemes before proceeding to Part Two and their second year of study. As such, the second year contains a range of more specialist modules, tailored to specific degrees and/or groups of degrees. Since my appointment, I have been responsible for one such second year module, Behavioural Ecology, a 20 credit, one semester module comprising 30 lectures and three practical sessions, the reports from which practical sessions are subject to summative assessment, each report being worth 10% of the total module mark (the remaining 70% being 3 exam essays). Registration increased from 34 students to 59 in the years covered by this teaching cycle.

Practicals involve the students in practice-based learning, undertaking observations and/or experiments that illustrate key theories covered in the module and allowing students to gain training in research methods and experience of working in small groups. Practicals are undertaken over the course of a full afternoon (3-4 hours) and reports are written up on an individual basis, albeit based on data obtained by pairs or small groups working together. Report-writing provides training and practice in writing up scientific experiments, following a similar model to that of investigations published in the peer-reviewed scientific literature, to which students were regularly referred during lectures and access to which was provided via hyperlinked reading lists on Blackboard (an online e-learning tool).

The module, as originally timetabled, had practical sessions scheduled at fortnightly intervals, commencing in the second week of teaching in the semester. Students were required to submit each practical report one week after the practical session had taken place. Reports, including the mark and feedback (annotations in the margin) were returned to students within three weeks of their submission.
What aspects of the module needed developing in order to improve student learning?

Students’ interest in feedback is frequently characterised as focussing upon the summative aspect (the mark that they achieved) rather than the formative aspects (how students' demonstration of their learning can be enhanced to better match the specified learning outcomes) (Race 2005) When marking reports I found myself making similar comments on a significant number of reports. I aimed to improve the level of pre-report guidance and post-report feedback to improve the students' interpretations of learning outcomes and recommended methods of achieving them. Assessing student work requires not only aligning the intended learning outcomes (Le the sought for qualities of performance) with the students’ actual learning outcomes but ensuring that the students are aware of the difference between these and how they can reduce this difference, thereby addressing the intended learning outcomes and obtain higher marks (Bigg 2003)

A second area of focus involved increasing the attention paid by students to the feedback provided. I observed the same mistakes in analysis and presentation being made in successive reports from the a significant proportion of the students on the module, suggesting either misinterpretation of the feedback provided or a lack of attention to the feedback. I aimed to enhance the emphasis on the necessity of learners interacting with the feedback provided in order to assist students in their learning and the correlation of their and my perceptions of what was required to meet the learning outcomes.

Which feedback methods were to be implemented?

In the first year I provided feedback to students by means of annotations in the margin, highlighting errors and suggesting ways of improving the practical reports. Examples ranged from minor presentational points (e.g. "Include units of measurement on axes of graphs") to more substantial aspects of their report writing (e.g. "Do not present statistical analyses as bullet points: write in sentences and explain clearly to the reader what you have found whether or not it is statistically significant - talk the reader through your results")

Practical reports for this, and other, second year modules differ significantly from those required in the first year and, in general, pre-university. Enabling students to analyse and present their research effectively is a key learning outcome for the module but requires their employing a number of techniques (e.g. statistical analysis, citations &
referencing, evaluating findings in the light of published studies). Although taught these skills in first year modules and a second year Research Skills module, transferring their usage to the research arena can be problematic (Jones 2009). It was therefore essential that I gained feedback from students relating both to their interpretation of the feedback provided in relation to the marks they obtained for their practical reports and what aspects they felt required improvement.

**Evaluation of Student Feedback on my Assessment Feedback**

In order to gain feedback on my marking methodology, I asked students to complete a questionnaire after they had submitted their second practical report (see Appendix 1, Question 3: this questionnaire includes other areas of learning on the module that are not dealt with in this Teaching Cycle). The reason for asking students for feedback at this stage was so as to gain their thoughts while memories of writing their second report were still fresh in their mind but before they obtained their marks and associated feedback in case this coloured their opinion of the usefulness of the feedback I had provided.

33 forms were returned, with a mean score of 4.5 (out of 5) for the question “Did you find the comments on your 1st practical useful?”. Only two respondents said they had not used or thought about the feedback I had provided when they came to write their second practical report. Both respondents also gave a low score (3) for the first question on the comments' usefulness. In retrospect it is possible that the first question was interpreted as "useful when you came to write your second practical report" rather than "useful in interpreting the reason that you obtained the mark you achieved in the first practical report". Nonetheless, a significant majority of respondents indicated that they believed the feedback had helped them.

Although mean mark for the second report was higher than that for the first report, many students made the same mistake again. The necessary anonymity of the questionnaire did not permit the aligning of marks with scores given and indications of whether feedback on the first report had been used in preparation of the second.

Only seven students provided qualitative feedback on the forms (Appendix 1). Two students highlighted the usefulness of knowing which specific areas they had not achieved full marks and how helpful it was to have an explanation of how they had gone wrong. However, such explanations were generally fairly concise. The main issue
raised concerned a desire for a greater depth of explanation of what was wrong (as well as what was right). This raised two problems for me as the assessor:

1. How much additional feedback should I provide - how should I balance the need for precision with the concision required due to the volume of reports to mark and pressure of other commitments?
2. Was greater depth of explanation required or were students misinterpreting my comments, thereby becoming confused? Related to this was that my comments might be better interpreted if re-worded, rather than expanded

Further Development of Teaching

After the second practical, one of the students on the module came to see me on an unrelated matter. During conversation, she let it be known that she wasn't sure what I meant by one of my comments: having interpreted it one way after the first practical report, she had been disappointed to be marked down, with a similar comment applied to the second. We went through her report and I asked her to explain to me where she felt unsure and which comments left her puzzled. After just a few minutes she exclaimed "Oh, I see! I wish I'd know that before". Although I had not said much, the personal interaction had enabled a step-change in her interpretation of the feedback I had provided. Marked blind, her next report nonetheless gained a 1st class mark - an increase of 15 marks and a significant move up the degree classification and a delight to both the student and myself. This incident left me determined to improve the quality of feedback I provided

The simplest way of improving the feedback seemed to repeat the experience described above: meet with all students on an individual basis after the first practical in order that they might (a) improve their mark for the second practical, (b) understand what the comments/annotations meant and (c) enhance their learning experience by tackling the experiments, their analysis and presentation in a more appropriate way, in line with the intended learning outcomes.

Prior to the commencement of the module, I had attended the CPD training session "Writing Effective Exam Questions" (see separate report) during which it had been suggested that, rather than write out the same comment a dozen times, more thorough communication of feedback could be made by supplying students with a general feedback sheet. Although unconvinced by the suggestion of supplying generalised
feedback lacking specificity or perceived relevance to specific learners, I decided to incorporate an amended version of this form of feedback.

Method of Implementing Improvements to Feedback

The following academic year, when the module next ran, I arranged the practical sessions such that there was time not only for me to mark the first practical report before they submitted the second, but such that I had an opportunity to meet with each student to go through their report. The popularity of the module had resulted in the numbers nearly doubling to 59 students, making the task difficult. While one to one feedback tuition is sometimes viewed as an ideal (Race 2005) it can be impractical given large classes characteristic of contemporary higher education institutions. I informed students of the manner in which they would receive feedback on the first, and subsequent, practical reports during the introductory lecture, reminding them of the individual meetings on the day of the first practical session.

Taking the suggestion of a generalised feedback sheet suggested at the CPD session, I developed this by providing a sheet with numbered points. Each point was clearly explained and, where appropriate, an example of good practice provided (see appendix 2) Numbers were then written in the margin of each student's report to indicate which points applied to which particular aspects of the report.

Once all reports were marked, I invited students to come to my office within specified time windows to collect the reports. Post-It notes were used to cover the mark on the last page so that I could go through the report with the student's full attention throughout. I also hoped that this procedure would lead to students listening to the comments and engaging in our discussion in a relatively objective manner, rather than with the assigned mark in the back of their mind, along with the thought "so that's why I scored X".

Prior to going through each report I explained that (a) I had marked nearly 60 reports and could not remember what they had obtained, and (b) that the numbers I had written on their reports were not marks but referred to the numbered feedback sheet (Appendix 2), a copy of which I provided at that point to each student).
Evaluating one-to-one Feedback Sessions

Students were provided with a feedback questionnaire to evaluate the usefulness of the one-to-one feedback sessions (see Appendix 3). This was provided immediately after they had submitted their second practical report so as to gain their thoughts while their memories of writing the second report were still fresh in their minds but before they obtained their marks and associated feedback in case this coloured their opinion of the usefulness of the feedback I had provided.

46 feedback sheets were returned by the students. The mean score for usefulness of the one-to-one sessions was 4.9 (out of 5). The mean score for usefulness of the numbered/written comments was 4.6. This latter score rose to 4.7 if one low score of 2 was removed. This low score was awarded by a student who indicated they had not attempted the first practical and had not attended a feedback session, suggesting that the explanation of the feedback sheets may have aided their later interpretation.

Qualitative feedback in the form of comments made by the students was positive to the point of being humbling. All students responding to this section commented favourably on the usefulness of one-to-one sessions, with many requesting them for subsequent practical reports (the form was completed prior to return of the second practical report). The most common answers to the question "What did you like about this form of feedback?" was that they liked being able to discuss my written comments, that it made it more relevant and that they could say things they couldn't in a group or after class. Only one student mentioned that they found it an embarrassing experience.

The main negative comment was the time students had to wait before being seen. The feedback took considerably longer than I had anticipated. I had planned, perhaps naively, to spend up to five minutes with each student - a total five hours of contact time. In fact the sessions took two to three times as long, often as a result of students wanting to know more about how they could improve, as well as opening up about other aspects of this or other modules. Their genuine interest during these discussions suggested they took the process seriously and were keen to understand not only where they had gone wrong (analytical or methodological mistakes) but to gain a better awareness of the intended learning outcomes.

A subset of students were asked what it was I had said that had made a difference, although this did not reveal any general points, as I had hoped. The key point was that
they appreciated the opportunity to ask questions, despite the apprehension as they awaited the revealing of their mark for the assignment

Reflection & Future Development

This Teaching Cycle set out to improve the level of pre-report guidance and post-report feedback to improve the students’ interpretations of learning outcomes and recommended methods of achieving them. It also aimed to increase the attention paid by students to the feedback provided. The student perceptions of and responses to the interventions I made were positive, and suggested that the interventions were successful in their stated aims. One aspect to be resolved for the future is whether to hold one-to-one feedback sessions after all practicals. The exercise took a number of days to complete as a result of the length of time spent with each of 59 students (nearly twice the number that were registered when I initially decided to trial such an approach), but was almost certainly more effective than a brusque five minutes with each student as the feedback suggested that they left feeling that I had taken a genuine interest in them, their work and their learning process.

Holding such feedback sessions after every practical would take a significant amount of time. Learners demand high quality feedback and while research has found they express a preference for individualised feedback and/or personal responses, they are aware that compromises may be required and are prepared to accept feedback (Ferguson 2009). Although the sessions were only held after the first practical, I made it clear that anyone who wanted to come and see me having received their subsequent marked reports and “feedback by numbers” sheet was welcome to do so. Fewer than a dozen took up the option, although they were returned in the last week of term, a week before the final deadline and some students had submitted early and departed the campus. I believe that this format is the best solution and is the one I will take forward:

personal feedback for the first practical report and the option of personal feedback on subsequent reports, with the actual feedback being provided on numbered sheets (Appendix 2) There is a significant benefit for the learners from such personal interactions with their teacher (Fry et al 2003; Race 2005), while were the exercise to be extended to all practical reports, a significant amount of time would be cut from other teaching and research activities, with likely deleterious affects on both.

Marking the reports in the knowledge that I would be meeting with the students concerned did make me think twice about the manner in which I expressed criticisms and
comments in the feedback that I provided to students. This was an unexpected effect but an illuminating one. While feedback may be seen as an attempt to align intended learning outcomes with obtained outcomes (Biggs 2003) the environment in which that feedback occurs may affect not only the style of its presentation, but the manner in which it is interpreted – hence the comments from students that they felt the feedback was tailored to them specifically and the one-to-one conversation allowed them to clarify the points being made. For the same reason, the knowledge that the learners were to receive their marked, annotated reports in person from the teacher may have effected their approach to the task. Being perceived as an individual who has been noticed can have dramatic, and positive effects on the learner's behaviour (Harper & Quaye 2008).

The positive response of students to the personal feedback sessions was matched by their overall response to the module as a whole as demonstrated by the positive nature of the qualitative feedback provided by students on the Faculty Module Evaluation Forms (see Appendix 4 for a representative sample). If academics undertake their role in order to make a difference to their students' education, in addition to their research endeavours, then the feedback obtained on these forms is invaluable in ascertaining whether one is on the right track. The esteem indicated on these forms serves to act as a driver to maintain standards and to meet the expectations of the each year's intake of new learners.

As in the first teaching cycle, a by-product was that I was able to put faces to names and get to know the students better. The photographs provided by ASTRA (the computerised student database) are taken on their first day at university and rarely bare more than a passing resemblance to students in their second year of study. Furthermore, the large number of students on the module (59) meant that it was difficult to learn all their names immediately. Meeting all the students on a one-to-one basis at a relatively early stage of the module allowed an increase in the teacher-learner rapport that can (and did) engender and enhance student contributions and interactions in subsequent classes (Ramsden 1992).
**Behavioural Ecology: Lecture & Practical Feedback**

As part of my training as a lecturer I am required to try out new teaching methods and obtain feedback from students. This questionnaire is to gauge the usefulness of the lectures, marking of practicals and material on Blackboard so far in this module for comparison with the following weeks and to help improve it for future years. I would be very grateful if you could answer these questions honestly. All answers are confidential! Please do not write your name anywhere on the paper.

Please **circle** the appropriate answer or number, using this guide to scoring:

| 5 | good/yes | 4 | no preference | 3 | 2 | 1 | bad/no |

1a) How do you rate the **LECTURES** so far?  
1b) What do you like **best** about the lectures?

1c) What do you like **least** about the lectures?

1d) How do you think the lectures could be improved?

2a) How do you rate the material provided on **BLACKBOARD**?  
2b) What do you like **best** about the material on Blackboard?

2c) What do you like **least** about the material on Blackboard?

2d) How do you think the module’s use of Blackboard could be improved?

3) **MARKING**

   a) Did you find the comments on your 1\textsuperscript{st} practical useful?  

   b) Did you use them / think of them when planning/writing your 2\textsuperscript{nd} practical report? Yes/No

   c) What other comments would be helpful to you?

   d) How else could marking be improved to help your learning?
4) Any other comments about my teaching and/or this module?

Thankyou for completing this form. Please place in box at end of lecture.
What your marks mean:

59 = very nearly a 2:1 but not quite. Only a little more quality/effort needed to get a 2:1
60 = a 2:1 but only just! Take note of the comments to be sure you improve and obtain a
2:1 next time
65 = a good 2:1

Circled numbers in your report refer to the following points:

1. Write clearly, in properly constructed sentences. Read through before handing in.
2. Use correct and consistent citation format. e.g. "Rowe et al. (1991) found that..." OR
   "Female guppies prefer larger males (Rowe et al. 1991). Do not include author initials in in-
   text citations.
3. Reference List: use a consistent formatting style (e.g. either full journal names or
   abbreviations, but not both). List all references in alphabetical order of 1st author surname.
   Check you cite in your report all those listed at the end.
4. Use small letters for the statistical tests used for this practical: t, r, n, p
5. Cite the original studies (i.e. journal articles) rather than citing the text book in which you read
   about the study. Text books will list at the back the articles they cite.
6. Cite studies/theories that support your ideas suggestions. These can be those covered in
   lectures, the text book or other reading you have done. List them at the back (see [3]).
7. Explain how your results fit in with those of other studies. Explain any differences in methods
   or results, especially if they affect your own findings or offer solutions to problems you
   encountered.
8. State clearly whether or not the difference was significant (for an example, see [9]).
   E.g. "Females spent significantly more time adjacent to larger males than smaller males (t = ,
   n = , p = ; see Graph 2 and Table 1)". OR: "Females spent more time next to large males
   than small males but this difference was not significant (t = ....)"
10. Include units of measurement in all tables and on axes of graphs. E.g. "height (m)"
11. Write in the past tense. You should describe what you did, not what others should do
    (although it should contain enough information for others to be able to repeat the
    experiment).
12. Write in the 3rd person. E.g. "The results suggest that" NOT "My/our results show...". Also, "A
    female yellow guppy was placed in the tank" NOT "we placed a female yellow guppy in the
    tank"
13. Do not repeat the instructions provided in the handout. State that these were followed and
    add any additional information. E.g. the colour of your females and males and how you went
    about Part 2.
14. It is the difference that is significant. "Results" can only be significant in a broader context
    (e.g. sexual selection theory or climate change) when they might suggest that a particular
    broader theory is true.
15. Present (and statistically analyse, if appropriate) all data that you collect. E.g. If you
    measured the time spent on each side of the tank after the preferred male was removed,
    include this data.
16. Give each Table, Graph or Figure a title. E.g. "Figure 1: Graph showing mean female
    preference for large males and small males"
17. Refer to each Table, Graph or Figure in the main text of the Results section (and/or
    elsewhere). For an example see [8] above.
18. Use small letters for common names of species. E.g. great tit, guppy
19. A t-test compares the difference between two groups of data. A correlation (measured using
    "r") assesses how much one variable (e.g. height) is associated with another variable (e.g.
    weight).
As part of my training as a lecturer I am required to try out new ideas and obtain feedback from students. This questionnaire is to gauge the usefulness of the one-to-one feedback on the 1st practical and your general thoughts on the module so far for comparison with previous years and to help improve it for the future. I would be very grateful if you could please answer these questions honestly. All answers are confidential. Please do not write your name anywhere on the paper.

Please circle the appropriate answer or number, using this guide to scoring:

<table>
<thead>
<tr>
<th>5</th>
<th>4</th>
<th>3</th>
<th>2</th>
<th>1</th>
</tr>
</thead>
<tbody>
<tr>
<td>good/yes</td>
<td>no preference</td>
<td>bad/no</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

1a) How do you rate the LECTURES so far?

1b) What do you like best about the lectures?

1c) What do you like least about the lectures?

1d) How do you think the lectures could be improved?

2a) Did you find the one-to-one feedback session on your 1st practical useful?

   i) What did you like about this way of giving feedback?

   ii) What did you dislike about it?

   iii) Any other comments on it?

   iv) Do you think it helped you on your 2nd practical more than just reading written comments? Yes / No

b) Did you find the written comments useful (including the numbered comments on the feedback sheet)?

   5  4  3  2  1

c) How could the written comments be improved?

d) Did you use, refer to or think of them when planning/writing your 2nd practical report? Yes / No

e) How else could marking & feedback be improved?
3) **Any other** comments/suggestions about this module?

Thankyou for your help!  

Please place in box at end of lecture
Comments (overleaf) are representative of all comments obtained, and were collected at the end of the semester in the year that personal feedback sessions were introduced. Comments refer to the whole module and are not specifically related to the feedback sessions.
INSTRUCTIONS

1. Please read each of the statements on the other side of this sheet. The statements refer to lectures, practicals or the module as a whole. Please disregard those which are not appropriate.

2. Enter the module number on the top of the form in the space indicated.

3. Carefully block in the rectangle in the appropriate column alongside the statement using a soft pencil. Correct any mistakes with an eraser.

4. Do not make any other mark in the sheet.

5. Use the space in the box below for any general comments you may have concerning the module.

COMMENTS:

a great module
Taught what I wanted to learn.
INSTRUCTIONS

1. Please read each of the statements on the other side of this sheet. The statements refer to lectures, practicals or the module as a whole. Please disregard those which are not appropriate.

2. Enter the module number on the top of the form in the space indicated.

3. Carefully block in the rectangle in the appropriate column alongside the statement using a soft pencil. Correct any mistakes with an eraser.

4. Do not make any other mark in the sheet.

5. Use the space in the box below for any general comments you may have concerning the module.

COMMENTS: Best module done so far. Only down side was only 1 week to do write up. Other than that was the best lecture and perfect in every way.
INSTRUCTIONS

1. Please read each of the statements on the other side of this sheet. The statements refer to lectures, practicals or the module as a whole. Please disregard those which are not appropriate.

2. Enter the module number on the top of the form in the space indicated.

3. Carefully block in the rectangle in the appropriate column alongside the statement using a soft pencil. Correct any mistakes with an eraser.

4. Do not make any other mark in the sheet.

5. Use the space in the box below for any general comments you may have concerning the module.

COMMENTS:

Best module ever \///