Citation:
Hartford, T and Fitzgerald, P (2008) Involving students in the assessment process from day 1: group, peer and self assessment. Assessment, Teaching and Learning Journal, 4. 20 - 24. ISSN 1756-8781

Link to Leeds Beckett Repository record:
https://eprints.leedsbeckett.ac.uk/id/eprint/1122/

Document Version:
Article (Published Version)

The aim of the Leeds Beckett Repository is to provide open access to our research, as required by funder policies and permitted by publishers and copyright law.

The Leeds Beckett repository holds a wide range of publications, each of which has been checked for copyright and the relevant embargo period has been applied by the Research Services team.

We operate on a standard take-down policy. If you are the author or publisher of an output and you would like it removed from the repository, please contact us and we will investigate on a case-by-case basis.

Each thesis in the repository has been cleared where necessary by the author for third party copyright. If you would like a thesis to be removed from the repository or believe there is an issue with copyright, please contact us on openaccess@leedsbeckett.ac.uk and we will investigate on a case-by-case basis.

36257 New ALT Journal:Layout 1 19/8/08 16:28 Page 20

Involving students in the assessment process from day 1: group, peer and self assessment

Trudy Hartford and Pauline Fitzgerald

There is a push to increase the level of practical activity in undergraduate courses to make Bioscience students more 'fit for market' Research by SEMTA targeting bioscience employers indicated that over a quarter of bioscience graduates do not have the skills they need (SEMTA, 2008). Students seem to have difficulty transferring skills from module to module and year to year, especially numeracy and technical skills, but also simple concepts like Harvard referencing. It has been suggested that the learning of principles and concepts by putting them into practice facilitates transfer to dissimilar problems based on the flexible mental representation developed (Billing, 2007). To address these issues a condensed approach to skills and personal development was implemented over the first five weeks of Biomedical Science-related courses (Hartford and Fitzgerald, 2008). Students were encouraged to see the course from a holistic viewpoint by including content from all modules and applying, for example, maths and laboratory skills to a range of content. An online reflective journal was used to engage students with feedback and develop self-assessment competence. A questionnaire evaluated the students' experience, including their reasons for choosing the course, expectations and self-assessment.

This case study presents a week-long activity which took place towards the end of the first five weeks of the first year. The 'Dream Team' experience was devised to reiterate and put into context a number of technical skills as well as to encourage an appreciation of assessment criteria, group work and peer-learning. The week explored and used group work in the classroom and in the laboratory, peer (formative) assessment of posters produced by students and intra-group assessment of collaborative work. Posters are increasingly becoming required at interview and as a means of communicating in many arenas; therefore poster assessments have been used at Level 3 for a number of years. However, it was felt that students needed more development of the skills required to produce a more professional poster, for example the ability to collect and display key points from complex projects.

When undergraduates begin at university many will have looked at marking schemes but 'assessment criteria' will be a new term to many and they will often be written in academic jargon. Developing assessment criteria that are interpreted in the same way by all can be difficult and several authors have stressed the importance of involving students in the assessment process (Elwood and Klenowski, 2002; Orsmond et al; 2000; Rust et al, 2003). Involving students in the development of assessment criteria gets them to think about how they will be assessed by tutors and additionally engages them with assessment (Orsmond et al, 1996). There is also evidence that students learn by involving themselves in communities of practice or inquiry – the more they interact with their peers, the more likely they are to engage with learning (Boud, 2001; Sainsbury and Walker, 2008). There is some evidence that using peer assessment of particular skills can lead to an improvement in assessment of similar tasks and this may improve a student's ability to self-assess (Freeman, 1995).

Outline of week plan

Day 1: The aims of this session were to encourage familiarity with assessment criteria and group work: in particular, to think about and value the range of inputs that is required in a successful team. The initial session explored roles involved in group work by means of a Belbin questionnaire (Belbin, 1993) which each student completed. The students were asked to note their two highest scoring 'roles' on a Post-it® Note along with some picture or means of identifying it later. The Post-its were collected and stuck around the walls of the room in groups – the aim being to have a mixture of types in each group. While the Post-its were being sorted the students had a discussion about assessment criteria – what they were, where they could find them, how to use them. Then students developed their own assessment criteria for group work. Their suggestions were collected by the tutor and were discussed, edited and agreed by the students during the session. Students located their Post-its and met their group.

36257 New ALT Journal:Layout 1 19/8/08 16:28 Page 21

Day 2: Each group met in the laboratory to carry out some simple experiments using some of the equipment and techniques that they had been introduced to in lectures and laboratory sessions in the preceding weeks. Each group was given two problems relating to the experiment to address. Before they finished this session they had to outline to the tutor what equipment they would need to investigate these problems.

Day 4: On completion of their laboratory investigations, groups were supplied with poster materials on which to display their findings.

Day 5: Poster display: Each group was given a grid of poster assessment criteria and asked to assess and provide feedback for another group. Completed grids and comments were pinned next to the relevant poster to give some instant formative feedback in student-friendly language but also to encourage students to learn from each other with regard to level and skills. Tutors gave instant feedback using Post-its entitled "what you did well...", "how to improve..." etc, which provided exemplars to enhance understanding of marking criteria and the level of knowledge expected (Orsmond et al, 2002). Posters were assessed by tutors and individual marks awarded after adjustment with the intragroup peer assessment. The group peer-assessment form was posted onto X-stream and used by the students to submit electronic feedback on their peers.
Finally students wrote reflections on their Belbin roles and the whole group experience in their online reflective journals.

Outcomes

Distributing the Belbin roles into groups

One unforeseen issue was that out of 100 students there was an even distribution of most of the roles but only two leaders. This could be due to the nature of the Belbin questionnaire or the types of person attracted to Biomedical Science courses. Similar results have been observed with the final-year cohort. However, the key aims for this session were to get students to self-reflect, work with new groups of people and think of different roles in a group.

Development of assessment criteria

The assessment criteria for group work developed by the class were largely similar to those used in other modules (Figure 1) in that the criteria being assessed were the same, but the language used was not. From the discussion on criteria it appeared that some students valued leadership more than any other role in a group, without thinking of the value of other roles, and hence leadership was proposed as a criterion. A discussion ensued regarding the value of other roles such as research, ideas, being able to complete a project and so on.

Figure 1: Student-developed Assessment Criteria

Criteria:
Creativity/ ideas and suggestions Info to rest of group Attentiveness – willing to listen/respect for opinions Attendance Organisation – trust Leadership Team worker Constructive criticism Patience Asking for ideas
Extent to which the student: Doesn't pull their weight Doesn't turn up for meetings No contribution Control freak Not listening to other people Not relevant contributions Lack of organisation

36257 New ALT Journal:Layout 1 19/8/08 16:28 Page 22

Group work sessions

Some of the students did not attend the initial session and were all placed in the same groups, as many of these students were less motivated than their peers. This reduced disruption to group work overall; however, one or two students missed the session for genuine reasons and subsequently found themselves in a generally uncooperative group. While the majority enjoyed working in a group (Figure 2), for some this was a stressful experience. As an example, Group X consisted of members A and B who attended all sessions, member C who was repeating the year and missed the first two sessions, members D & E who were friends and only attended one session each. C, D and E did not join in with any of the laboratory-based work but watched A and B. For the peer assessment, C, D and E gave poor marks to A and B but high marks to each other. As a result of this we felt that we could have assessed some elements of group work by observation, rather than the one product of the whole week. Some groups had strategies for working together on their problem; others obviously had not met in between sessions or made any useful plans during the sessions. Some had not grasped how the peer assessment was being used in relation to summative assessment and found it unfair. It might also make a difference to the comfort of students if there was a more explicit mix of individual tutor and peer assessments (Boud et al, 2001; Cogdell et al, 2004).

Figure 2: Summary of evaluation of these sessions

	Strongly Agree	Agree	Neither agree / disagree	Disagree	Strongly Disagree
Session 1: Belbin Roles					
This session helped me think about my strengths and weaknesses when working in a group	22	29	22	4	1
Being involved in developing the assessment criteria made me think more about the skills being developed in the session	25	30	22	5	0
Laboratory sessions					
I enjoyed working as a member of a team	40	25	13	4	2
As well as developing group skills these sessions improved my laboratory skills	36	36	11	1	0
Poster sessions					
I feel peer reviewing helped me think about the group process and my role	20	39	15	6	3
		28		7	3
Assessing other posters helped to think about the skills involved	20	26	25	4	4
The 'Dream Team' experience helped me think about how to function in a group with people I don't know	34		14		
Student Comments Positive (n)					
• Helped get used to/think about lab work (3) • Helped introduce new people (2)	• Enjoyed working with different people (5) • Belbin role was accurate				
Student Comments Negative (n)					
• Lack of cooperation of peers (4) • Peer assessment is unfair/didn't like it (2)	• Others can hinder your performance • Felt alienated, was happy to be told what to do but I wasn't needed				

36257 New ALT Journal:Layout 1 19/8/08 16:28 Page 23

Student feedback

The majority (67%) of students felt that involvement in the development of assessment criteria helped them to think about the skills being addressed by this activity. This might help students understand more clearly the relationship between assessment criteria, what is expected of them and skills development in other modules. Fewer students (58%) enjoyed assessing the posters using criteria developed by staff. When the same criteria were used again in the second semester to evaluate a final-year student's poster, both the marks for the critique and entries in the students' reflective journals indicated that they had developed a good understanding of and had engaged with the assessment criteria.

Although 77 % enjoyed working as part of a team and 86% agreed or strongly agreed that the sessions improved their laboratory skills, some found the experimental work very simple and felt that the problems might have been more engaging if they had been more challenging. Some students wanted to learn new techniques and investigate something in more depth (indicated by the module questionnaire).

By introducing peer assessment and involvement with the assessment process at an early stage we hoped to get students thinking about assessment and skills development throughout the whole course. Early feedback from tutors from a range of modules suggests a definite improvement in skills, particularly practical skills, compared with previous years.

"There's no such thing as good assessment." Discuss. Perhaps a more appropriate statement is "there's no such thing as non-stressful assessment". In an exam there's hand-cramping, mind-blanking, time speeding away and the very definite feeling that your entire grade, your entire education, nay, your entire life depends on this moment. Then there's coursework; the old "I've got a whole month to do this, no need to start it now" trick, culminating in the mad last-week rush when deadlines approach and you're already supposed to have redrafted three times. Presentations? Giving a talk to a class full of people willing you to slip up so they look better? You must be joking.

As a future Philosophy student (fingers crossed) I feel there could be some case made for an assessed argument – you're put in twos, each given a contrary viewpoint and told to battle it out, hopefully without resorting to violence. But that's no good either – being pitted against someone who might be debating team champion and general loudmouth and being expected to hold your own? Scrap that. Little bit of examination; little bit of coursework; little bit of assessed work or discussion in supervisions. It ain't pretty, but it works."

Rachel Golding
Skipton Girls' High School
Hoping to study Philosophy

36257 New ALT Journal:Layout 1 19/8/08 16:28 Page 24

References

Belbin, R.M. (1993). *Team Roles at Work*. London: Butterworth Heinemann.

Billing, D. (2007). Teaching for transfer of core/key skills in higher education: Cognitive skills. *Higher Education* 53, 483–516.

Boud, D. (2001) Making the move to Peer Learning. In: Boud, D., Cohen R., Samson, J. (2001) *Peer Learning in Higher Education*. London: Kogan Page.

Cogdell, B., Brown, A. and Campbell, A. (2004). Peer assessment of group work in a large class – development of a staff and student friendly system. Case Study. In: Orsmond, P. *Self and Peer Assessment Guidance. Teaching Bioscience enhancing learning series*. Leeds: Higher Education Academy Subject Centre for Bioscience.

Elwood, J. and Klenowski, V. (2002). Creating communities of shared practice: the challenges of assessment use in learning and teaching. *Assessment and Evaluation in Higher Education* 27 (3), 243-256.

Freeman, M. (1995). Peer Assessment by Groups of Group Work. *Assessment and Evaluation in Higher Education* 20 (3), 289-300.

Hartford, T. and Fitzgerald, P. (2008). A condensed approach to skills. Proceedings from Higher Education Academy Annual Conference, Harrogate, 1 – 3 July.

Orsmond, P., Merry, S. and Reiling, K. (1996). The Importance of Marking Criteria in the Use of Peer Assessment. *Assessment and Evaluation in Higher Education* 21 (3), 239-250.

Orsmond, P., Merry, S. and Reiling, K. (2000). The use of student derived marking criteria in peer and self assessment. *Assessment and Evaluation in Higher Education* 25 (1), 23-37.

Orsmond, P., Merry, S. and Reiling, K. (2002). The use of exemplars and formative feedback when using student derived marking criteria in peer and self assessment. *Assessment and Evaluation in Higher Education* 27 (4), 309-323.

Rust, C., Price, M. and O'Donovan, B. (2003). Improving Students' Learning by Developing their Understanding of Assessment Criteria and Processes. *Assessment and Evaluation in Higher Education* 28 (2), 147-164.

Sainsbury, E.J. and Walker, R.A. (2008) Assessment as a vehicle for learning: extending collaboration into testing. *Assessment and Evaluation in Higher Education* 33 (2), 103-117.

SEMTA (2008). *Bioscience Sector Skills Agreement*. Available from: **www.semta.org.uk/employers/science/about_sector_skills_agreements/bioscience_ssa** [Accessed April 2008].

Trudy Hartford
Teacher Fellow, Enterprise Pioneer

Pauline Fitzgerald
Senior Lecturer, Faculty of Health