The magic bullet: formative assessment with peer and tutor feedback in the VLE

Ollie Jones

Introduction

This paper describes and evaluates the use of a formative assessment activity within Leeds Met's Virtual Learning Environment (VLE) to provide both peer and tutor feedback during the module on an assessment element prior to the main assignment. The task was also designed to provoke students' interaction with each other and the VLE itself, and act as a familiarisation with e-tivities that formed another part of the assessment. This concept is aligned with Stages 1 and 2 ('Access' and 'Motivation') of Salmon's (2000) five-stage model of online engagement.

The author also wanted students to develop critical thinking skills and internalise assessment standards, as Gibbs & Simpson (2004) indicate when they describe "learning by assessing, to develop judgment, error spotting and self supervision".

Nicol and Milligan (2006) identify seven types of good practice goals for feedback, and these factors were used as a guide to constructing the formative assessment process.

1. Helps clarify what good performance is (goals, criteria, expected standards)
2. Facilitates the development of reflection and self-assessment in learning
3. Delivers high quality information to students about their learning
4. Encourages teacher and peer dialogue around learning
5. Encourages positive motivational beliefs and self-esteem
6. Provides opportunities to close the gap between current and desired performance
7. Provides information to teachers that can be used to help shape the teaching.

The module used was a Level 3 Business Studies elective on Project Management with approximately 50 students. The chosen task was the production of a scope statement, which is similar to a project abstract or proposal. This was covered in the lecture series but not in the seminar, owing to time constraints. Perhaps as a result the student performance in this element of the assessment was generally weaker than in the other elements, and it was therefore a good candidate for this trial.

Design

Figure 1: Design Story Board

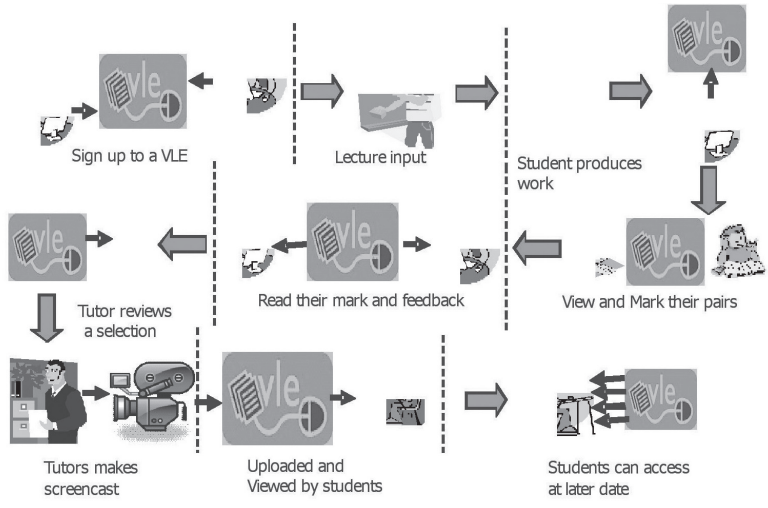


Figure 1 shows the process for the formative assignment cycle. In the first week students were asked to sign up to a 'work-set pair' in the VLE. In week 2 students were introduced to the concept of scope statements in the lecture and were tasked to write one, and to submit this online in the third week. In order to help the students to complete this formative task the scope statement was based on the case used in the tutorial series to avoid additional workload, and to help students to understand the case more. In addition the students were provided with a template document for completing the statement and were told that although the exercise was formative, a similar task would form part of the summative assessment at the end of the module.

The author devised some simple assessment criteria related to the summative assessment criteria for students to mark each other's work. During the following week (3-4) students were asked to 'assess and mark' their pair's scope statements, using both the set criteria and general comments. The following week (5) the tutor reviewed the comments and marks from a sample of the statements and provided feedback on these. This was done using screen capture software, highlighting key areas of the statement texts in different colours for relevant feedback themes and providing verbal feedback as a 'voice-over'. The resulting 5-minute video file was posted to the VLE at the end of that week. The students could then access this at any time during the module, but it was not designed to be discussed in class.

Evaluation of design

Comparing the design of this formative assessment against Nicol and Milligan's (2006) feedback goals allows a review of the design, shown in Table 1.

Table 1: Design review table

Feedback goals	Design detail
Helps clarify what good performance is (goals, criteria, expected standards)	Use of set criteria Moderation of peer review by tutor
Facilitates the development of reflection and self-assessment in learning	Marking peer statements is a start towards self-assessment
Delivers high quality information to students about their learning	Every student received a degree of individual feedback in terms of a score and some general comments The screencast provided rich visual and verbal feedback on a number of statements for the students
Encourages teacher and peer dialogue around learning	Some limited single loop asynchronous dialogue between students and between students and tutors
Encourages positive motivational beliefs and self-esteem	All peer reviews focused on positive feedback and to a lesser extent negative feedback Because the tutor was able to showcase good statements written by students, increased students' confidence in producing suitable work in this area
Provides opportunities to close the gap between current and desired performance	The feedback provided by peers and the tutor could be used again in helping students improve their summative assessment performance, especially as the feedback, and their initial attempt as well as that of their peers was available constantly online
Provides information to teachers that can be used to help shape the teaching	The tutor was able to identify common errors and important misconceptions both in terms of further feedback and assessment briefing but also to inform the subsequent teaching delivery

The table indicates to that five of the seven goals have been satisfied to a significant extent, with the weaker areas of the design relating to dialogue and self-assessment, which will be considered in the conclusion.

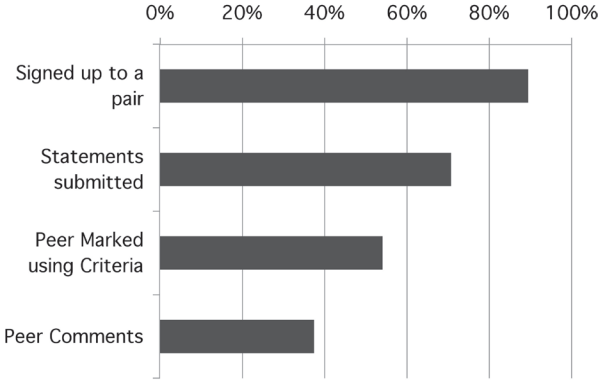
Evaluation of outcomes

The design was evaluated using a number of methods, including the module survey, formative and summative assessment outcomes and VLE usage statistics.

VLE usage statistics

Figure 2 shows that of the 48 students on the module, 90% signed up for a pair, 71% actually submitted a scope statement for review, just over 50% participated in peer marking and 38% provided some qualitative comments on their pair's submission.

Figure 2: Graph of VLE usage statistics



Initially the students' submissions were lower than shown in Figure 2 and had to be encouraged by the tutor stating that unless 50% of students submitted there would be no tutor feedback at all. This provided some stimulus to the cohort to participate.

Generally the standard of work submitted was good, but it did contain enough variation to enable the tutor to highlight important themes of both positive and negative elements. Students were quite generous in their marking of their peers, although they did show some differentiation. The quality of the qualitative comments varied significantly but around 50% of students who commented produced some appropriate and relevant criticism, all of which was constructive.

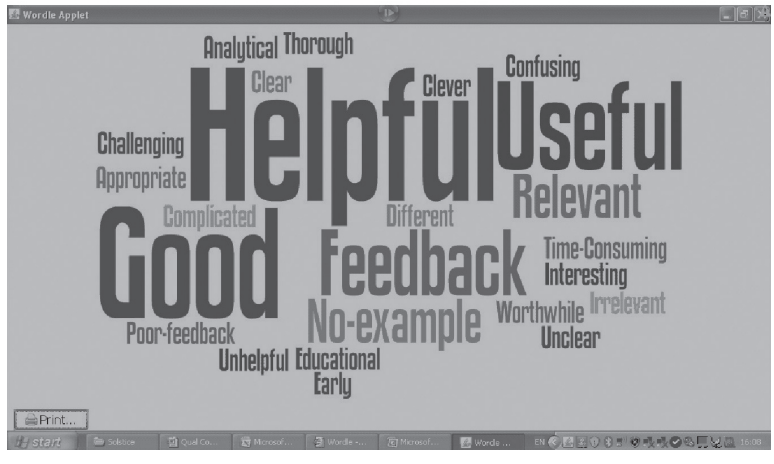
The usage statistics show that accessing the formative scope assessment area was a highly popular activity and ranked 4th in the whole VLE with over 1,000 hits, which was comparable to the summative assessment components. Over 83% of students accessed the tutor's feedback, but without exception only once. This figure is higher than the both the 71% submitting and the 50% who marked their peers, which does indicate some 'free loaders'.

Reviewing a sample of five students' individual VLE records showed that they logged on and reviewed their peer's feedback the following week, but they also accessed the area a significant number of times nearer the assessment, which accounts for the majority of the area usage.

Student evaluation

The students were asked in the module evaluation to identify three words related to the statement task. From this the author was able to construct a word cloud, identifying recurring themes from the students' perspectives (Figure 3). The sample size was 54% of the cohort.

Figure 3: Word cloud on student evaluation comments

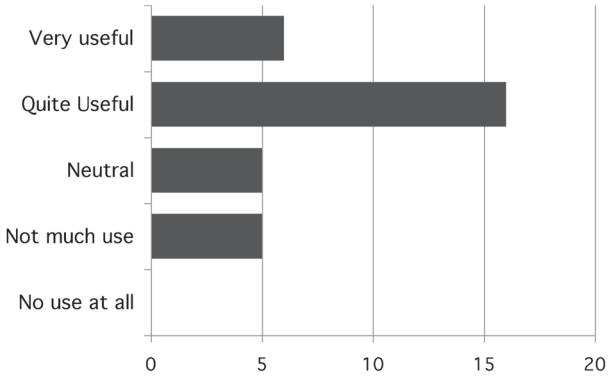


Overall this shows that the students found the exercise helpful, useful and constructively aligned (relevant). There were some negative comments, although these were in the minority with about 12% of the overall comments. Two students complained that the tutor failed to provide "an example" or model answer. However, that appears not to be the opinion of the majority, considering the number of times the students' own work and peer comments were accessed, compared with the tutors' screencast feedback.

Some students commented on the lack of clarity on the task, and it is probably fair to say that the instructions for uploading, and especially marking and comments, could have been made more accessible and comprehensive, perhaps using a screencast.

Finally, the quantitative survey, which had a sample size of 66% of the student cohort, showed correlation with the word cloud, with the clear majority showing that the formative assessment on scope statements was useful to their learning (Figure 4).

Figure 4: Student evaluation data



Assessment outcomes

Although it was not given a separate mark, the quality of this element of the final summative assessment showed a significant improvement on previous cohorts. However, the scope statements still showed significant differentiation in performance, and hence remained an effective form of assessment.

Conclusions and recommendations

The formative assessment exercise on constructing scope statements and peer assessing appears to be a success, with significant numbers of students engaging positively in the process and finding the exercise useful and helpful. It enabled students to improve their performance in the summative assessment, but did not diminish the assessment's ability to differentiate between students. The workload task was manageable for the students and efficient for the tutor and provided a means by which students could start to engage with virtual learning prior to other activities within the VLE.

The design process or story board could be applicable to many forms of assessment and academic subjects, and while this approach is not new, and not dependent on a VLE, using X-stream provides more flexibility in achieving the assessment and feedback cycle, especially as the tutor does not have to be directly involved for most of the time.

As indicated by Oldham et al (2007), and recent Leeds Met ALT Strategies, the formative assessment and feedback cycle needs to be more embedded in many teaching and learning contexts, and this approach could help achieve this.

Improvements for the next cycle may include more comprehensive and accessible instructions for the task, some element of self- as well as peer-assessment, and the addition of some class discussions to the activity to create more dialogue, with perhaps some further dialogue on the feedback within the VLE. In addition the access conditions will be investigated to minimise the possibility of 'free-loaders' receiving any form of feedback without contributing any work.

References

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Ollie Jones
Senior Lecturer, Strategy and Business Analysis
Faculty of Business & Law