Should Students do More?
A Case for Peer Learning and Immediate Feedback

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Abstract

The literature reveals general agreement on the importance of student engagement and effective feedback in facilitating student learning. However, in an environment of resource constraints and increasing class sizes, these aims can be difficult to achieve. This paper presents a trial of an assessment technique, undertaken with undergraduate marketing students, focusing on peer learning and the provision of immediate feedback using interactive answer sheets, which allow students the opportunity to reflect and act upon the feedback. This assessment strategy engages students and provides effective feedback while shifting the responsibility for learning from teaching staff to students. Student response (n=105) strongly supports the benefits of this strategy for improving learning outcomes, creating more effective student teams and enhancing the student experience.

Keywords: Marketing education, student feedback, peer learning, student engagement

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Introduction

Feedback and student engagement have been identified in the literature as critical factors in facilitating learning in higher education. However, increasing class sizes and resource constraints challenge the ability of teaching staff to provide timely and effective feedback as well as creating an interactive learning environment. This paper discusses the trial of an assessment and feedback technique with second year undergraduate marketing students designed to address these challenges. This technique is one of the strategies employed as part of team-based learning. The objectives for introducing this initiative were to promote class preparation by undertaking the assigned pre-reading and to provide timely feedback to students on their understanding of key concepts prior to a discussion focusing on their application. Further, this strategy sought to provide a team building experience for student groups as well as an opportunity for peer learning.

Literature Review

Assessment and feedback have been widely discussed in the higher education literature and are viewed as critical components of student learning (e.g. Brown and Knight, 1994; Rust, 2002; Weaver, 2006). Characteristics of effective feedback relate to its timeliness (Ramsden, 2003) and its ability to be acted upon (Price *et al.*, 2010a). In fact, it has been stated that "Giving feedback to students without requiring them to actively engage with it is likely to have only limited effect" (Rust, 2002, p.51). The effectiveness of feedback also needs to be considered in the context of what it is trying to achieve (Price *et al*., 2010b). For example, feedback can be used for correction, reinforcement, forensic diagnosis, benchmarking and longitudinal development (Price *et al.,* 2010b). It has also been suggested that feedback should address future learning tasks that is, taking a 'feed-forward' as opposed to 'feed-back' view (Gibbs and Simpson, 2004). Therefore, significant importance can be attached to the actual impact of feedback as opposed to simply the delivery and receipt of feedback (Boud, 1995). Student interest in feedback is likely to be reduced when it is received on a 'finished product' and therefore cannot be acted upon (Price *et al.*, 2010b). The socio-constructivist view of feedback suggests that it is part of a dialogue in the learning process as opposed to the cognitivist view which sees feedback as a one-way communication (Askew and Lodge, 2000).

A traditional form of providing student feedback is through written comments on a piece of work. However, studies have found that this type of feedback can be of limited value as students are often unable to interpret what is meant by the comments, or find them ambiguous, and further, have no opportunity to clarify their understanding through dialogue (Ivanic *et al.*, 2000; Porkorny and Pickford, 2010; Price *et al.*, 2010a; Walker, 2009; Weaver, 2006). In addition, students may ignore written comments when they have no opportunity to act upon the feedback and tend to focus primarily on the mark itself (Butler, 1988; Porkorny and Pickford, 2010). Academics also suggest that the quality of written feedback is being hampered by resource constraints in processing assessment tasks of increasing large numbers of students (Crisp, 2007; Knight, 2002; Price *et al.*, 2010a).

These resource constraints have served as the impetus for teaching staff to consider a range of strategies to maximise the use of available resources to maintain the quality of the learning

experience. For example, peer learning shifts some of the responsibility for learning from the lecturer onto the student and has been recognised as beneficial in achieving a range of learning outcomes (Keppell *et al.*, 2006). Peer learning is a strategy whereby "students learn with and from each other without the immediate intervention of a teacher" (Boud, 2001, p.113). Peer learning can promote generic learning outcomes in relation to teamwork and communication skills as well as providing increased opportunities for students to articulate learning and engage in reflection (Boud, 2001). The concept of team-based learning (TBL) also recognises the unique benefits achieved through peer learning. TBL uses small groups of students to promote more active and effective learning through carefully structured team learning activities (Michaelson, 2004). TBL is particularly useful for subjects which contain significant content and require students to be able to apply or use the content (Fink, 2004). A key component of TBL is the need to make students accountable for their learning and in particular, for being prepared or ready to learn. That is, students need to have an understanding of the content before any discussion of its application can take place. TBL uses a strategy called the 'readiness assurance process' to evaluate student preparedness. A component of this includes the use of an in-class test, undertaken by teams, using special answer sheets whereby students 'scratch' the appropriate response (much like a lottery ticket) and receive immediate feedback as to whether their answer is correct. If incorrect, students have the opportunity to reflect and discuss before attempting the question again for reduced marks. This strategy has been found to offer a number of benefits including immediate, unambiguous feedback, accountability for class preparation, personal interaction and engagement with subject content, class attendance and team cohesiveness. The following section will outline the trial of this strategy in an undergraduate marketing subject.

Method

The readiness assurance process was trialled in a second year undergraduate compulsory marketing subject. The main focus of this subject was on the application of select marketing concepts, hence it was structured as a one hour large lecture (approximately 130 students) and a two hour smaller workshop (approximately 30 students) designed to apply the concepts discussed in the lecture to a specific company situation. In past semesters, students were expected to prepare for the workshop discussion by having attended the lecture, undertaken the reading and discussed the concepts in relation to the company in their teams prior to the workshop. Each week the discussion was facilitated by a student team. This discussion was assessed by the tutor and written feedback provided by both the tutor and the other teams participating in the tutorial. Two written assignments were submitted at mid and end of semester. Increasingly the teaching staff found that students did not have a strong grasp of the concepts which then led to a superficial workshop discussion of the application of those concepts. Further, there were frequent difficulties in the teams in terms of level of participation in the written assignments, class attendance and active engagement in the workshop discussion. In addition, disseminating feedback on the assignments, particularly the one submitted at the end of semester, was difficult. That is, many assignments were not collected, or if collected, only one team member was likely to read the comments. Therefore, if students had incorrectly understood or applied concepts in the assignment, this feedback would not necessarily be received to assist students in undertaking the exam.

A solution was sought to achieve the following objectives: ensure that students understood the subject content prior to discussing the application; increase the effectiveness of teams; improve student engagement in workshop discussion; and improve the depth of discussion.

The teaching team decided to trial an adaptation of the readiness assurance process (RAP) used in TBL. That is, at the beginning of selected workshops, student teams undertook a test relating to the key concepts to be applied in that workshop discussion. The teams were comprised of four or five students and while most teams consisted of either all local, or all international students, some teams were a mix of both. These teams undertook the test using an immediate feedback assessment technique. That is, answers to multiple choice questions were selected using a specially designed form that allowed students to 'scratch' their answer and receive immediate feedback. That is, if the correct answer was selected, a star would appear. If the answer was incorrect, students were able to reflect, discuss, debate and select another response for reduced marks. This immediate feedback was a critical part of student learning as it enabled them to reassess their answer while they still remembered their rationale for choosing the original incorrect response. Students were allowed three attempts at each question. Active debate and engagement enabled students to learn from each other as well as to articulate their own understanding of the concept. Further, if students felt that their answer was correct, despite what was indicated on the answer sheet, they were allowed to 'appeal' their result through submitting a written justification. Once the tests were completed, the overall workshop results were announced (without attributing a result to a particular team) to allow the teams to benchmark their performance against the other teams and adjust their study strategy accordingly. Overall results for all workshops were subsequently posted on the subject blackboard.

At the end of the semester, the impact of this assessment and feedback strategy was evaluated by a student survey as well as soliciting feedback from the teaching staff. The student survey was voluntary and anonymous and sought to measure student attitudes and behaviour in relation to the objectives of the initiative, that is, the ability of the RAP to provide useful feedback, enhance teamwork and motivate students to do their reading and preparation before the workshop. Demographic data was collected and open ended questions were included to ascertain what students believed to be most useful about the RAP and what could be improved. A total of 105 surveys were completed, providing a response rate of 83%. The profile of respondents was: 57.3% female, 42.7% male; 93.3% full time students, 6.7% part time; and, 61.2% local, 38.8% international students.

Results

The results indicate that student attitudes towards the RAP were positive with all items scoring above 4 on a 5 point scale as shown in Table 1.

Table 1: Student Attitudes Toward the RAP

n=105	Mean		Std. Deviation
	Statistic	Std. Error	Statistic
Provided helpful feedback on concepts	4.110	.0806	.8262
Immediate feedback is helps my learning	4.314	.0769	.7883
Team performance comparisons helpful	4.076	.0954	.9776
Helped my team work well together	4.186	.0969	.9934
Encouraged to do reading before workshop	4.171	.0882	.9036
Valuable part of subject	4.221	.0796	.8120
Enjoyed RAP	4.210	.0944	.9677

1= strongly disagree, 5 = strongly agree

The data was examined for significant differences in response according to gender and origin of student (local versus international). Unfortunately the number of part time students was too small to allow for comparison with full time students. The analysis revealed that there were no significant gender differences on the majority of items with the exception of enjoyment. The data suggests that males tended to enjoy the RAP more so than females, with a mean of 4.47 compared to 4.00 (p=.008). Further, analysis indicated that there was a significant difference between local and international students on only two items. Local students were more likely to indicate that the RAP helped their team to work well together (m=4.32) than international students (m=3.95). However this was significant only at the .10 level (p=.082). In addition, international students were more likely to indicate that the RAP encouraged them to do their reading before the workshop (m=4.45) than local students (m=4.02). This difference was statistically significant (p=.014). A Pearson correlation was undertaken to examine the relationship between items. This analysis indicates that there is a strong correlation between both feedback items (helpful feedback and immediate feedback) and the RAP being perceived as a valuable part of the subject.

Student comments in response to the open-ended questions were analysed and several themes identified which provided some richness to the information received from the quantitative analysis. The benefits that students derived from the RAP related to three key areas: improved learning outcomes, team building and engagement. With regard to improved learning, this outcome was primarily derived from both the opportunity for peer learning and interaction as well as the immediacy of the feedback. This sentiment is conveyed in the following student comments: "*It's easier to learn when teaching other",* "*It was challenging. It promoted healthy discussion and inspired me to do the weekly reading"*' and finally, "*I have done a lot more learning through the semester than in other subjects because of the RAP*."

The benefit of the RAP in encouraging student engagement as well as building more effective teams was a frequent theme in the student comments. These quotes illustrate these outcomes: "*It made the learning more interesting. It also helped build relationships with my fellow team members,"* and *"It was exciting, I loved the scratching part, and it's good that it gave you immediate feedback."*

Although student comments were primarily positive, there was also some negative feedback in some cases. Student concerns related mainly to the perceived unfairness of the questions, for example, when asked to identify an 'incorrect' response as opposed to the 'correct' response. In addition, some students struggled to manage the required reading for each RAP exercise (even though the RAP was not conducted every week).

In addition to student views, teaching staff noted a number of additional benefits associated with including the RAP as part of the workshop session. First, attendance greatly improved which allowed for face-to-face interaction amongst team members during and after the workshop, reducing the reliance on text and email communication to get group work done. Second, the RAP allowed teams to 'warm up' by starting the session with small group discussion prior to commencing the larger group discussion on the application of the concepts. Students seemed to feel more comfortable contributing to the session, perhaps due to greater confidence in understanding the core concepts. Finally, commencing the session with the RAP created a sense of energy in the room. One tutor provided the following feedback in an email after the first session, "*Just finished, and I'm impressed. The RAP got everyone 'in the mood', and the enthusiasm was amazing. I had one group 'high-fiving' each*

other when they got 4 marks on each question, and another tell me that it was like defusing a bomb, not sure which colour wire to cut first!"

In general, based on student and staff feedback, incorporating the RAP into the workshops effectively overcame the challenges that had been identified with the subject's previous format. That is, team effectiveness improved, students appeared to have a better understanding of the concepts which resulted in a more participative and indepth discussion regarding their application. However, despite the positive outcomes associated with the RAP initiative, there was some concern that students appeared to have struggled to prepare for both the RAP as well as the discussion of the application of the concepts to the company that was the focus of the two main assignments. Because the RAP exercise was worth marks and the discussion was not, students sometimes focused on the former at the expense of the latter.

Discussion

As discussed in the literature, providing effective feedback can be challenging given the often limited resources available to do so, as well as the student's ability to both understand the feedback and to take action based on it. The RAP served to make students more accountable for their learning by motivating them to prepare appropriately, partake in peer learning, allowing them to articulate their understanding and learn from their colleagues. This feedback provided through this approach did not require significant involvement of tutors during this part of the workshop. Further, having access to immediate feedback allows students to reflect and further test their understanding of the content. Benefits of immediate feedback also have been highlighted in studies using classroom response systems. This technology "provides students with knowledge of their state of learning, allowing them to make adjustments in their strategies for learning and encourages immediate reflection on their learning" (Chen *et al.*, 2010, p.166). The RAP provides the same benefits without the expense or complications associated with technology. Academics considering integrating the RAP into their subjects need to be aware of both the potential benefits to enhancing learning outcomes as well as the challenges in implementing this strategy effectively. Like all group assessment, the problem of 'free riders' needs to be managed as not all team members may adequately prepare for the RAP. This issue has been highlighted in other studies on peer learning (i.e. Keppell et al., 2006). Further, questions must be carefully designed to achieve the learning outcomes of the subject as well as to stimulate discussion and debate. However, as with all multiple choice tests, there must be one 'right' or 'best' answer which limits their use. Further exploration of this technique needs to be undertaken. The success of this trial may have been a result of the level at which the students were at, that is, second year. In addition, part of the appeal to students may have been due to its novelty which means that its effectiveness may be reduced if used in a number of classes.

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