This is the authors’ final peer reviewed (post print) version of the item published as:


Available from Deakin Research Online

http://hdl.handle.net/10536/DRO/DU:30050731

Reproduced with the kind permission of the copyright owner. This article is © Emerald Group Publishing and permission has been granted for this version to appear here. Emerald does not grant permission for this article to be further copied/distributed or hosted elsewhere without the express permission from Emerald Group Publishing Limited.

Copyright: 2012, Emerald
UTILISING THE VIRTUAL LEARNING ENVIRONMENT TO ENCOURAGE FACULTY REFLECTION AND IMPROVE THE STUDENT LEARNING EXPERIENCE

Tiffany M. Winchester and Maxwell K. Winchester

ABSTRACT

Student evaluations of teaching (SETs) are the most frequent form of faculty performance in the classroom, though they tend to be used as summative rather than formative evaluations. In this chapter, a project involving the use of a virtual learning environment for formative, weekly SETs is explored from both the student and faculty point of view at a rural university college in the United Kingdom. This project encouraged student participation in creating the learning environment and faculty reflection on how to improve the student experience. From the student perspective, the weekly anonymous evaluations were useful for providing feedback; however, students tended to only respond if they were not satisfied with the faculty member. The exception to this was that some students were more motivated to complete the evaluation forms if they believed the faculty member was utilising their feedback. From the faculty perspective, the feedback was not as detailed as they had expected, and some questioned whether it was worth the effort of conducting formative evaluations if the response rate was so low. Others used the feedback for reflective purposes, and it was found that those that reflected on their work at higher levels tended to receive a greater year-on-year increase in their end of year teaching evaluations.

INTRODUCTION

Years ago, the quality of a university was solely judged by its research output (Massy, 1994). Although the informal introduction of student evaluations of teaching (SETs) occurred in the 1960s, the practise was formalised in the 1980s and 1990s when there was a push to recognise the value of the quality of the teaching students received (Hittman, 1993). Student evaluations of teaching quality are now the most frequent form of evaluation of faculty performance in the classroom (Becker & Watts, 1999; Davis, 2009; Lill, 1979; Onwuegbuzie, Witcher, Collins, & Filler, 2007; Parayitam, Desai, & Phelps, 2007; Read, Rama, & Raghunandan, 2001; Yao & Grady, 2005). Now higher education institutions not only seek student views, but also attempt to act upon them; the institutions that report the outcomes of changes publicly have achieved high scores in quality assurance (QA) reports (Leckey & Neville, 2001).

With the implementation of formalised SETs over the last few decades, it is easy to assume that the quality of teaching should have improved. However, what qualifies as ‘good teaching’ is subjective and has caused disagreement in the literature (e.g., Carmichael, Palermo, Reeve, & Vallence, 2001; Kember, Leung, & Kwan, 2002). Even though the definitions vary, it could be assumed that most academics in higher education seek to improve their teaching quality. Some literature suggests that the best form of response on which to encourage consideration about teaching quality is student feedback (Beaty, 1997). Beaty (1997) notes, however, that finding efficient ways to understand the student perspective is crucial and the
best strategy is to use a method that requires the least amount of effort from both the faculty member and the student while still gathering useful information. It could be argued that SETs are an efficient method of gathering such information, and possibly why they have such great acceptance across universities.

The rationale for implementing such a QA system in universities was to ensure that faculty members were engaging in good teaching practices. The principle that university teaching not only can be improved, but should be improved is widely accepted (e.g. Ramsden, 1992); however, the reliance on SETs to measure the success of this has been widely criticised (Anderson, Cain & Bird, 2005; Cahn, 2011), questioning the aforementioned ‘usefulness’ of the information they provide. This information collected at the end of semester or degree via the SETs is used for a variety of purposes. The most obvious is that SETs provide an academic with feedback, which they may utilise to improve their teaching methods (Chen & Hoshower, 1998). While “such evaluations are . . . the most important, and sometimes the sole, measure of an instructor’s teaching ability” (Wilson, 1998, p. A12, cited in Becker & Watts, 1999), given they are usually administered at the end (summative) rather than during (formative) a semester, there seems to be a more retrospective QA practice. This focus, common in most universities across Australia, New Zealand, the United States, and the United Kingdom, SETs may be more concerned with “quantifying some of the presumed indicators of good teaching and good management” (Biggs, 2001, p. 222) rather than focusing on the actual quality of teaching and learning. In this sense, they may be useful for administrators, but of limited value to the faculty member (Becker & Watts, 1999; Onwuegbuzie et al., 2007; Yao & Grady, 2005).

CRITICISMS OF STUDENT EVALUATIONS OF TEACHING

A few educational researchers have questioned whether SETs have any direct impact on the overall quality of teaching (Kember et al., 2002). In some instances, it is argued, SETs can actually have a negative impact on teaching quality due to the increase in stress or pressure to perform (Brown, 2008; Mercer, 2006). Such criticisms of using SETs include

- Grading leniency bias (higher ratings when higher grades are expected, and therefore vice versa); _Adapting unit difficulty (e.g., reducing the amount of homework or dumbing materials down to keep students happy, or even reducing or eliminating the fail rate of students);
- Decreasing the likelihood that teachers discuss controversial ideas or challenging questions because of the fear that students will decrease their scores on the SET, thus the SET becomes a threat to academic freedom (Braskamp & Ory, 1994, cited in Parayitam et al., 2007);
- Decreasing the chances that the teacher be willing to challenge the student, thus actually decreasing the learning in the classroom (Pritchard & Potter, 2011);
- Other factors over which the faculty member has little control may influence the SET score, such as cosmetic factors (such as faculty member’s gender, race, sense of humour, and/or physical appearance);
- Whether the unit is a required unit or an elective, student effort and student interest in the unit (McPherson, 2006; Onwuegbuzie et al., 2007; Parayitam et al., 2007; Scriven, 1995; Weinberg, Hashimoto & Fleisher, 2009).

In spite of these criticisms, empirical research has shown some SET tools directly measure quality of instruction (Barth, 2008). If this is so, there is an argument that those who benefit most from any improvement in teaching quality would be best to provide such information:
“Learners are perceived by many to be the most reliable source of data about the relationship between teaching and learning on the grounds that they are witness to the teaching across time and the best judge of its effects on their achievements” (Pratt, 1997, p. 35). From a customer service perspective, it has been argued students are in fact customers of universities and therefore it is important to ensure they are satisfied, though there have been debates about whether students should be seen as ‘paying customers’ and therefore treated as such. One might suggest that some of the criticisms of SETs have come about because one begins to think of the student as a customer. However, since students are stakeholders who are intricately involved in the classroom, it is reasonable that they should have some sort of voice in its outcome, and help to shape the learning environment.

A major issue with the current implementation of SETs is that they are most commonly administered at the end of the semester or degree programme in a summative manner. Since students who typically complete such SETs have finished the unit of study, or their degree, they cannot experience the positive outcome of these evaluations (Winchester & Winchester, 2011). Such summative SETs are of limited benefit to the students completing them. The current system of only using summative SETs also risks a decrease in student motivation to correctly fill in evaluation forms, therefore possibly reducing their meaningful input. It is important for students to see that the information leads directly to changes in teaching or curriculum, as students tend to doubt this when completing end of semester evaluations.

Response rate for summative SETs seems to vary depending on how they are administered. One study noted that students attending an Open University course were mailed the questionnaire with a postage-paid envelope, along with two or three reminders. The response rate to this SET was around 60% (post-exam) and 50% (if done within the unit of study) (Kirkwood & Price, 2005). Others have noted that the response rate to SETs seems to be declining over the years (their data cited 44% and 39%), possibly due to student fatigue and disinterest (Leckey & Neville, 2001). To address this issue, one study encouraged student response by tying it to grade release, increasing the response rate to near 80%, though they did acknowledge this may have biased the results of the SET (Pan et al., 2009). Oliver and Sautter (2005) reviewed the literature from the late 1990s and early 2000 and noted that most research found that online SET response rate was much lower than in-class ones, though their own research found that with continual assurance of student response anonymity, there was no significant difference between the methods of eliciting response. More recent work found that participation in an online survey with e-mail solicitation had only a 20% response rate (Kidwell & Kidwell, 2008), and one Australian university which made the switch from paper-based to online SETs found that the overall response rate across the university was initially 5%, though with changes to the design as well as faculty promotion of the SET, the result increased to 21% (Hamilton, Sibley, & Hawkins, 2011). Overall, some researchers note that with the decrease in response rate in shifting from paper-based to online SETs, the overall mean rating of the SET doesn’t change (Stowell, Addison, & Smith, 2011) though there would be a decrease in the overall amount of qualitative feedback from the students.

Most importantly, given the possible focus on organisational rather than faculty objectives in interpreting results of SETs, it appears that Ramsden’s original hope for teaching evaluation in many cases has not been taken on board: “Evaluation is not at heart about collecting evidence to justify oneself, nor about measuring the relative worth of units or teachers. It is about coming to understand teaching in order to improve student learning” (Ramsden, 1992, p. 241). This point of view is consistent with other views that the main purpose of teaching evaluation should be to allow the faculty member to use it as part of their reflective practice (Trigwell & Shale, 2004). This suggests evaluations would be more useful for students if they were conducted formatively, rather than summatively as is the common practice. A formative evaluation would allow the faculty member to utilise feedback to improve
their lectures as they happen, rather than waiting until the end of a year or semester when what
they actually did in a particular class may be difficult to recall. However, as mentioned earlier
by Beaty (1997), finding an efficient system that works for both the faculty member as well as
the student may be a challenge. As well, in light of the changing response rate for SETs, asking
students to complete more than one SET and also provide meaningful feedback also may be
problematic.

DEVELOPING A FORMATIVE FEEDBACK SYSTEM

In light of this, a system of formative evaluations needed to be developed that was efficient for
both faculty and students. The project came about serendipitously after conducting mid-unit
feedback forms with open-ended questions. The responses of the students were positive and
detailed, concurring with previous research on mid-unit evaluations where students perceived
they reflected positively on the instructor’s commitment to teaching and performance (Brown,
2008). This observation led to the idea that it might be worth doing continuous formative
evaluation throughout the life of a unit. However, these mid-unit feedback forms were paper-
based and conducted during the class-time, and the results then needed to be entered into a
spreadsheet in order to look at the overall results. The thought of conducting more than one of
these, or even progressing to doing them on a weekly basis, was a daunting task from the faculty
members’ perspective. As well, from the student perspective, this used up valuable class time,
and while some might consider the reduced lecture time a benefit, overall there would be a
decrease in the amount of learning time available each week.

It was important to recognise that different student groups at different levels of
education may have different needs and styles of learning, and therefore the same teaching
style may not be appropriate for all units, nor each time the unit was run. It was hoped that an
outcome of this project was that knowledge gained would assist in the continual improvement
of each unit, and potentially adapting each unit’s presentation to that particular group of
students.

Therefore, the aim of the overall project was to explore the feasibility of weekly online
evaluations of lectures both from a student and faculty point of view. The objective of using
the virtual learning environment (VLE) for conducting the formative evaluations was two-fold.
First, it allowed anonymous student feedback in a convenient, easily accessible manner, which
was tied in with activities the students were already involved in via the VLE, and therefore
added to their learning experience. Second, it allowed the faculty to gain weekly feedback
without ‘putting themselves out there and asking for it’ and utilise that feedback to improve
their teaching as it happened. Most student evaluations were previously conducted by the
students in the classroom setting (Becker & Watts, 1999), and recommendations are that the
teacher be absent in order to reduce biases (Lill, 1979). Conducting SETs electronically is not
a common practice, though with the increase in student numbers across many universities and
constantly updated technologies, this practice is becoming less unheard of, especially in the
sciences (Peat & Franklin, 2002) and online learning programmes (Ogunleye, 2010). However,
with this switch from paper-based to online SETs, survey nonresponse is increasing (Adams &
Umbach, 2012).

Though there are other more intensive forms of evaluation, such as peer reviews,
teaching portfolios, and qualitative feedback from students, Read et al. (2001) noted these place
a greater demand on those doing the evaluation, as well as the institution, as they are more time
consuming. This study addresses the time consumption demand by conducting the evaluations
both online and weekly in order to gain ongoing quantitative and qualitative feedback. As well,
such formative objectives eliminate the need to consider many of the aforementioned criticisms
of SETs outlined earlier, as the purpose of using formative SETs is for personal development only.

SETTING UP STUDENT EVALUATIONS OF TEACHING THROUGH THE VIRTUAL LEARNING ENVIRONMENT

Prior research indicates that there are limited criteria of effective teaching that students can evaluate effectively and therefore provide useful feedback to (Green, Calderon, & Reider, 1998). Therefore, it was important to research what types of questions were both assessable by the students, and also useful for feedback to the faculty member. Calderon, Gabbin, and Green (1996, cited in Green et al., 1998) noted that students were unable to effectively assess items beyond their scope of knowledge, including

- sufficiency of unit content;
- whether unit materials are current;
- instructors knowledge of the subject matter;
- appropriateness of unit objectives and content;
- appropriateness of technology used in the unit.

Another issue for questionnaire design was the use of opened- or closed-ended questions. While closed-ended questions make the questionnaire quicker to fill out from the student perspective, open-ended questions provide the opportunity for students to provide explanatory feedback. Mostly close-ended questions were used, as this practice is most common (Becker & Watts, 1999; Lill, 1979; Onwuegbuzie et al., 2007), usually with an arbitrary rating from 1-5 Likert scale, anchored by Strongly Agree and Strongly Disagree on either end. There has been concern in previous research about reducing the ‘complex teaching process to series of numbers on a teaching form’ (Mercer, 2006, p. 24), but it facilitates easy interpretation and was less time-consuming for the faculty member to assess the evaluation forms. One open-ended question was added at the end of the questionnaire to allow for any other feedback the student wished to make.

A list of possible questions was compiled using a variety of literature (Becker & Watts, 1999; Lill, 1979; Onwuegbuzie et al., 2007; Parayitam et al., 2007) and faculty feedback before the final questionnaire was assembled. This questionnaire was pilot tested during the first few weeks of study by the students before being finalised for use throughout the year. This common questionnaire was administered to each faculty member to use as a guide, though they were encouraged to add questions that were more specific to their unit. The final SET included the following questions based on themes (note: the themes were not visible to the students):
There was not any formal criterion for the selection of faculty and units, though it was hoped that the participants might come from diverse backgrounds so a broad range of data could be collected (Yao & Grady, 2005). Faculty from different departments, seniority, gender, and experience were asked to volunteer for the study, and the eLearning department also gave recommendations on what faculty members might be interested, based on their engagement in the VLE previously. Nevertheless, as the study was exploratory, representativeness was not a major criterion for the selection of participants. Each faculty member was given a set of instructions and a training session on how to set up the SET within their unit’s VLE, and how to access the feedback each week.

LECTURES PITCHED AT THE RIGHT LEVEL
1. The material covered in the class was aimed at a level that I understand.

MATERIAL PRESENTED IN AN INTERESTING AND CHALLENGING MATTER
2. The lecturer presented the subject material in a way that was interesting.
3. The lecturer presented different viewpoints on the subject.
4. I have learned a great deal in this class.
5. The lecturer encouraged me to broaden my understanding of the subject material through additional study.

BALANCE BETWEEN ACTUAL FORMAL LECTURING AND OTHER DISCUSSION-BASED ACTIVITIES
6. The lecturer encouraged relevant questions or comments.
7. The lecturer raised challenging questions.
8. The lecturer managed classroom discussions that they were useful.

PARTICULAR CLASS MATERIALS LINKED WELL TO MATERIALS PREVIOUSLY TAUGHT IN EARLIER WEEKS (OR OTHER MODULES) (OR REAL WORLD)
9. The lecturer related the subject matter among the topics in this module.
10. The lecturer related course material to real-world situations whenever possible.

LECTURER’S COMMUNICATION ABILITY
11. The lecturer organised the subject matter of this course in a logical manner.
12. The lecturer communicated clearly and effectively.
13. The lecturer inspired interest in this subject material.
Initially, it was proposed that students would have to fill in the questionnaire as a condition of downloading their class notes off the VLE, thus creating a ‘roadblock’ before they could access the materials. However, the British Educational Research Association deemed this unacceptable practice: ‘researchers must not use coercion or duress of any form to persuade participants’ to provide feedback (BERA, 2004, p. 7). It was agreed by the researchers not to use the questionnaire as an immovable caveat to downloading the unit materials, and instead, it would need to be linked to the VLE in a different manner.

Each faculty member was therefore able to choose what technique they would like to use for eliciting feedback from the students, as long as they complied with BERA guidelines. Half of the faculty members did not normally provide printed out notes in class and the students were responsible for downloading them from the VLE. In these cases, the evaluation tool was linked to the notes, and the students were faced with a ‘speed bump’ of the evaluation tool each week prior to getting their notes (though they could by-pass the evaluation tool and not answer the questions). Another faculty member linked them to activities, which the students will revisit once the lectures are all completed. One faculty member did not link the evaluation tool to any VLE items, and simply reminded the students to fill it in each week.

PHASE ONE: FACULTY PERSPECTIVE ON UTILISING THE VIRTUAL LEARNING ENVIRONMENT TO RECEIVE FEEDBACK

The faculty members represented a number of departments within the overall university college, representing Business, IT, Veterinary Nurses, and Environmental Studies. Four of the faculty members were from British backgrounds, one Canadian, and one Australian. Most of the respondents had only been teaching for a year or two, and two of the respondents had over ten years’ experience. Two of the respondents were males, and four were females, and the ages varied from earlier teaching career (20s) to later teaching career (50s).

Qualitative interviews were conducted with the faculty members about half way through the yearlong project, once they had received approximately 12 weeks of feedback (note: the units for this particular study were run on a 25 week basis). All of the faculty members had experience with the typical end of year evaluations conducted university wide by the university’s QA department. These evaluations tended to rate the overall unit on a score of 1-5, and that information was fed back to the faculty leader of the unit. Most of the faculty members expressed frustration with the current system of summative evaluations in terms of implementing changes to their teaching method, so were interested in the idea of using weekly feedback via the VLE. One expressed a great deal of interest in using the VLE for weekly feedback, as ‘If you got immediate feedback at the end of that session, you can actually do something about it in the beginning of the next session’. A few of the faculty members had tried to do their own formative evaluations in previous units, and one attempted to do this via the VLE, stating they were too shy to ask for feedback during the class time. However, they found the experience frustrating: ‘I think out of a 104 students I think I had about 10 actually fill it in, having given them about sort of 4 weeks. So I wouldn’t bother with that again’.

Based on the experience that the volunteers had previously with student evaluations, the researchers queried what made them want to get involved in the project of weekly SETs via the VLE. One faculty member wanted to get involved in projects with like-minded faculty and was interested in further developing as a reflective practitioner. A few mentioned they were really interested in getting more detailed feedback from the students as perhaps they were not confident enough to ask for it in class, or lacked experience in ‘reading’ the students during the
unit: ‘realised that I had no idea what kind of level I was talking to and if the students were getting anything out of it. . . . I wasn’t experienced enough to really get that verbal feedback during class’. Others noted that the context of the feedback, being via the VLE, was interesting as the feedback would be easily accessible, but were concerned that while the students valued the VLE, ‘they value it for revision and that’s their primary source for all the links’.

One interesting find was that regardless of the method used for eliciting feedback from the students, all faculty struggled with a lack of response rate from students. All participants were disheartened by this factor: ‘. . . that ends up being a 25% response rate for the overall class . . . makes you wonder if that was representativeness enough to be able to do anything with the feedback . . . those students that respond, is there a reason they’re responding?’ The literature on expectancy theory suggesting that students will be motivated by seeing their input into the lecture being taken seriously may have led some students to keep using the evaluation tool, but didn’t seem to inspire new students to sign up, supporting the work of Chen and Hoshower (1998).

Some questioned the students’ ability to be critical when evaluating a lecture, as most of the feedback was very positive. ‘I’ve gone into class and actually shown them the results from the previous week, and made the comment that everything seems to be fine again . . . try to encourage them that way . . . . I’m not sure how you get students to make more comments’. However, one new faculty member commented that even if there were not many comments made or many students participating, you still had an overall view of how the lectures were going, consistent with research finding that students are ‘discerning evaluators who are sensitive to different qualities of courses’ (Remidios & Lieberman, 2008, p. 112).

When asked about their barriers to using the evaluation tool, the respondents tended to agree that one impediment was the lack of student response. While they were positive about the evaluation tool itself, they questioned its usefulness in light of a small number of students actually utilising the tool. Another comment made by a number of the respondents was the lack of critical evaluation of each lecture. ‘I think the problem is the students are apathetic, I just don’t think they care enough to make comments that are useful . . . their view on the way teaching works is, maybe they don’t see it as a two way communication’. This is consistent with the research by Chen and Hoshower (1998) on the essential components of meaningful and active participation (p. 532) when looking at the link between motivation and outcome. In this case, that type of participation did not seem to be elicited by the overall student responses to the evaluation. One respondent agreed with this, and even taught some nonupdated lectures to see if the students would respond, ‘almost like a test to see if they were doing it right, and found that the feedback didn’t actually change as much as I would have thought that it should’. This is consistent with research by Divoky (1995) in that students generally became more uninterested with the evaluation tool because it was too familiar.

There were some serendipitous findings to the study. One faculty member, when questioned on what they did with the feedback noted:

To be fair I think it’s not so much what have I been doing with the feedback tool, for me it was the fact that I knew that feedback was coming, I consciously changed my lecture before. . . . I had been evaluated on it . . . knowing those were the questions they were going to be answering I actually changed the lectures that I ran from last year so that they would be able to answer those questions positively.

Thus, the evaluation tool provided a sense of motivation, and the questions themselves provided scope for what elements should be changed. Another faculty member noted:

One of the questions in particular asked if they were inspired to go and learn more, perhaps wasn’t something that I’d identified as a key thing that I should be doing . . . which is of course
in a final year group is something hopefully very important. I think I was quite interested to find out whether I had done enough of a push to get them to go out and look for themselves at the end of a lecture.

Regarding the usefulness of the VLE for conducting feedback, the results were varied. There were a few comments about how frequently they would use the tool, and most agreed that weekly was possibly too often, and a more flexible approach would be worthwhile. ‘I’m keen to actually evaluate...this focuses very much on what went on in the session...there are some other things I’m keen to experiment with. ... I thought our students would be more digitally natured than they are’. A few mentioned that perhaps the inclusion of more qualitative comments around each question would allow for more detailed feedback, but they questioned the student’s likelihood of responding to more detailed questionnaires. Others thought that there wasn’t a strong culture of using the VLE at this particular university, and therefore the students were not used to accessing the VLE on an ongoing basis, which may have impacted the response rate. Therefore, the second study focused on the research question: Are weekly online evaluations of lectures viable from a student perspective.

PHASE TWO: STUDENT PERSPECTIVES ON UTILISING THE VIRTUAL LEARNING ENVIRONMENT FOR PROVIDING FEEDBACK

This study considers student perspectives on the viability of filling in the evaluations both online and weekly. The evaluation tool was available to all students enrolled in each unit that was part of the study, a total of 192 students. From this population of students, the total number of participants in this study was limited to seven so the amount of qualitative feedback from the interviews would not be overwhelming. Again, as the study was exploratory, representativeness was not a major criterion for the selection of participants. The sample was drawn to ensure males and females were interviewed, along with students of different year level and unit. Five of the students interviewed were local UK students while two were final year international students from China.

The interviews took place towards the end of the year, after the students had an opportunity to fill in approximately 18-20 weekly evaluation forms (out of a total of 25).

An aide-memoire was developed which included the following points for conversation:

1. What has been your previous experience with evaluating lecturers?
2. How often did you fill in the evaluation tool? If not, why not?
3. Did you see any results from your lecturer/classes from your evaluation? Or, what do you think they did with the evaluations?
4. Did this response (or lack of response) inspire you to continue/start the evaluations?
5. Were there any barriers to you filling in the evaluation tool?
6. What changes, if any, would you suggest to this tool?
7. Would you like to continue using this tool?

All students indicated they had experience in filling in the common endof-unit summative feedback forms. Their feelings were mixed as to how they believed traditional evaluations were utilised by faculty members. Some students were confident that faculty took on board feedback they had received, though others were less convinced. Even when they believed that the lecturers would take on board comments given in summative evaluations, some students were
concerned that being at the end of a teaching period, they would not benefit from any changes made.

When asked about the formative evaluation tool, the results were also mixed. Some students expressed they were happy about the tool in the early weeks, but their motivation dwindled as the year went on. Others thought it was a real benefit having the evaluation tool, as they believed that any problems that arose could be dealt with quickly. This led to a discussion on their perceptions of whether or not the faculty member was using the feedback tool. Some were positive that their lecturer was using the feedback, and they were positive about the changes being made. Others noted that if they were not able to see changes, this might make the evaluation tool useless. One of the British students aired a similar thought: ‘I wouldn’t have put the same effort into doing the questionnaire if I wasn’t sure there would be a payoff’. These comments led the interviewers to understand the importance of ensuring that students were aware that faculty were taking on board the feedback coming from the evaluation tool. When this question was probed for further information, some students commented that since they had only put agree or strongly agree on the feedback form, they hadn’t expected to see any changes. Though this being said, they did comment that the lecturer brought up the feedback form each week, and therefore if there were changes that needed to be made, they were confident that the lecturer would take them on board.

The students were then asked about using the VLE for conducting feedback, and the overall results were positive. Students thought it was a useful tool for providing anonymous feedback, and appreciated having an outlet where they could express their views at any place and any time. The faculty concerns about response rate were also brought up, and some students commented that this should not be a concern, as they might only comment if there was a problem: ‘... no news is good news’. Students seemed to be more inclined to comment on negative issues, rather than provide constructive positive feedback.

A theme that arose around the timing of the tool was probed further. There was a conflict in feelings on this issue. Respondents almost unanimously did not want to fill out a survey every week: ‘I think it would be redundant ... I don’t think it would work. Having to do it for every class people will get very fed up of it very quickly’. Others commented that if the questions were different, or more tailored to the materials being covered, this might help. Others suggested reducing the questionnaire to 4-5 questions, with the inclusion of more open-ended questions for the opportunity to expand on the feedback.

The overall comments on the use of the feedback brought up a discussion on the type of faculty member who would be willing to receive weekly feedback via the VLE. Some students commented that the faculty members who were using the tool were those who would be willing to receive feedback. They also commented that they would have liked other faculty members to use the tool so that they could comment directly to them and ensure that faculty member received the feedback. This was confirmed by another student who saw the evaluation tool as an opportunity to give anonymous constructive feedback to other lecturers, knowing that feedback would go directly to the lecturer in question rather than via someone else. This may be related to the type of lecturer who would be willing to stand up to scrutiny and implement such a tool voluntarily, calling upon future research to explore this topic further.
PHASE THREE: IMPROVING THE LEARNING EXPERIENCE THROUGH FACULTY REFLECTIVE PRACTICE

The next study considered faculty use of information gathered by weekly formative SETs for reflective purposes. While previous research has shown that formative SETs are one form of information that can be utilised to encourage reflection (Beaty, 1997), there is limited research on the depth of the reflection that is undertaken using such information.

Being a reflective practitioner is considered a pinnacle of teaching practice and its desirability is assumed in the literature (Moon, 1999). The level of journal articles on reflection or reflective practice is phenomenal. A simple search using those terms will turn up hundreds, if not thousands, of articles looking at reflection as something that all teachers in higher education should aspire to, if not already be doing. At the time of writing, a simple search in Google Scholar using the search words ‘reflective practice’ and ‘higher education’ turned out 20,100 scholarly articles. Simply put, reflective practice involves a teacher realising that learning to teach is something that happens throughout their career, not just when they are taking their teaching qualification (MacFarlane & Ottewill, 2001; Zeichner & Liston, 1996).

Although much of the literature alludes to the use of journals, peer observation, notes or other qualitative forms of data (Beaty, 1997; Bolton, 2005; Loughran, 1996; Moon, 1999), ‘the process of becoming a reflective practitioner cannot be prescribed’ (Larrivee, 2000, p. 296). Although some literature suggests that the best form of response with which to encourage reflection is student feedback, it has also been noted that finding efficient ways to access this student perspective is a crucial element (Beaty, 1997). Such an efficient method has been developed and trialed by conducting formative SETs using the Internet or the university’s VLE in both the United States and the United Kingdom (Ravelli, 2000; Winchester & Winchester, 2010).

Though the aim may be to improve the quality of teaching, there is little evidence that SETs alone improve teaching (Rindermann, Kohler, & Meisenberg, 2007). However, if formative SETs can facilitate reflection by academics (Bolton, 2005; Norton, 2009) and formative SETs via the VLE are an efficient way to conduct such an evaluation (Winchester & Winchester, 2010), weekly formative SETs should then facilitate reflection. The type of reflection that could take place using week on week student feedback could be ‘reflection-on-action’, where faculty members review what happened the week before, possibly leading to ‘reflection-for-action’, where the faculty members identify what could succeed in future lectures (Killion & Todnem, 1991; Scho¨n, 2009). In these cases, the faculty members are ‘generating reflection by means of evaluative techniques’ (Moon, 1999, p. 211). The level of reflective practice taking place will vary depending on what the feedback is and how open the faculty are to the information ‘In most cases, feedback from students gives us much to think about. . .. Don’t ask questions if you are not prepared to hear the answers’ (Beaty, 1997, p. 18).

Reflective practice is something that can occur during a unit, at the end of a unit, or over a complete programme of study (Brown, Fry, & Marshall, 1999). A formative SET as proposed in this project is quite complementary to the idea of reflective practice during a unit. For example, Brown et al. (1999) suggest some areas that an academic could reflect on, including the success of particular activities, the pace of the delivery and the success of student engagement, noted as surface-level or content reflection (Kreber, 2004; Larrivee, 2008). Such information can be gleaned from a formative SET that could allow the academic to reflect on how to modify the class material week-on-week. Such information could also be very valuable in a teaching portfolio, as student evaluations are highlighted as a key component of such portfolios (Fry & Ketteridge, 1999). Most of all, however, such formative SETs provide a straightforward process to support faculty in their efforts to be reflective practitioners.
Previous research on reflection has noted that there are three distinct levels of reflection. The three levels, as outlined by Larrivee (2008), are

1. an initial level focused on teaching functions, actions or skills, generally considering teaching episodes as isolated events;
2. a more advanced level considering the theory and rationale for current practice;
3. a higher order where teachers examine the ethical, social, and political consequences of their teaching, grappling with the ultimate purposes of education.

Put simply, level 1 focuses on what the faculty member is doing, level 2 on why they are doing what they do and level 3 on to what purpose or to what end. The SET tool is therefore most likely to induce the first level of reflection, with the possibility of second-level reflection. At the highest level of reflection, teachers move from initially asking ‘Am I doing it right?’ to eventually asking ‘Is this the right thing to do?’ (Larrivee, 2008, p. 344). Therefore, the aim of this part of the study was to explore whether the introduction of weekly evaluations of lectures via the VLE encouraged active reflection about classes and units.

The same six faculty members were re-interviewed at the end of the 25 weeks of ongoing feedback once the formal summative evaluation form administered by the university’s QA department was completed. The interviews were conducted within a week of these results, thereby increasing the validity of the results (Bryman & Bell, 2003).

What is not surprising is that not all faculty members moved on from the surface reflection to pedagogical reflection. This phenomenon has been noted in previous research by Chappell (2007) when conducting teaching observations as a means to reflect. He noted that ‘the absence of pedagogic knowledge and reflection in the latter academics’ response to the teaching observations appeared to reaffirm the conventional lecturer-centred approach’ (Chappell, 2007, p. 263). Those who did have higher levels of reflection recognised that though the student response rate was not as high as they would have liked, they could still reflect over the course of the unit: ‘Using the evaluation itself made me reflect on what I was doing, the results of the evaluation, not so much’.

Those faculty members who engaged in pedagogical reflection were much more positive about using the evaluation tool, but for different reasons. Although two participants used the tool as an ongoing gauge of the students’ engagement with the class, or to assess their level of understanding, most used the tool as a reminder, or friendly nudging, as to what constitutes ‘good teaching practice’: ‘What’s interesting is the literature that backs up what the questions were based on makes sense, you know, “this is what you should be doing as a lecturer”. So it made me think about, you know, if these are the things I should be doing as a lecturer, am I doing them, is there any way I can improve, before I even go into class’.

It was also interesting to note the acceptance of blame, or recognition of an internal factor, which did not appear in those faculty members who only facilitated surface level reflection. While the discussions on why the results were the way they were varied for a number of reasons, it was interesting to note that many times those faculty members pushed the focus back on the students instead of internalising the issues: ‘Final year module I knew didn’t feel as good as it had done the previous year. Mostly I don’t put that down particularly to any different particular approach from me, different group of students, different reactions, different dynamics . . . some of the exercises just didn’t work as well from that point of view’.

Revisiting the different levels of reflection, it is interesting to note that the level of reflection (surface, pedagogical) and the type of reflection (reactive, proactive) determined how the faculty utilised the weekly SETs. For the reactive surface-level practitioners, the weekly online SETs provided structure within which they could think about the classes and/or unit, but the reflection stopped at that level. For the proactive higher-level reflection practitioners, the
frame provided a base from which to work, but did not enclose the levels of reflection, or stop them reflecting further. Those faculty members that were more involved in this student evaluation used the feedback to improve their teaching and as an incentive to improve future classes.

In the past it has been assumed that reflective practice relies on journals, peer evaluations and other qualitative data, but the formative SETs used for this study have provided an efficient and possibly effective tool that can encourage faculty to reflect on what they are doing - again, depending on the nature of the faculty member involved. This tool does not necessarily help academics become reflective practitioners, but it is useful as a tool for collecting data upon which reflection-on-action can lead to reflection for action taking place (Winchester & Winchester, 2011).

Kreber (2004) suggests that reflection is valuable only if its outcomes are valuable; in this case, improved teaching. While there is an abundance of literature on the importance of reflective practice, there have been very little, if any empirical studies to date examining or even searching for the evidence that reflective practice increases teaching. As well, there is no empirical evidence that the student recognises the value in the faculty member’s reflective practice. This begged the question: does faculty reflection on their teaching improve teaching quality, at least in the minds of those on the receiving end - the students?

PHASE FOUR: STUDENT REACTION TO IMPROVED TEACHING QUALITY

The 11 units taught by the six faculty members from four different departments within the institution were used for the study. From 11 units reviewed, 4 units had surface reflection level instructors and 7 had pedagogic reflection level instructors. Some students from three of the units may have completed the evaluation form on more than one unit within that year; however, overall the students were different for each unit. The total number of students that completed the summative evaluation for these units in 2008-2009 was 212, and in 2009-2010 was 192. For the purposes of anonymity and privacy, the specific unit titles are not used, and instead we have given anonymised titles based on the school the module was based. For example if we had an introductory marketing unit, so that the particular academic could not be identified, we would have labelled it ‘Business X’. The Year column indicates the main year of study that the students are in, ranging from year 0 (extended foundation students), year 1 (first year students), year 2 (second year students) and year 3 (final year students). A full breakdown of the student numbers by unit is outlined in Table 1.

Once all the results were generated via the compilation above, a table of averages across all units was brought together. The initial results indicated a positive change between the average 2008-2009 results and the 2009-2010 results. As the analysis involved a simple comparison of two mean scores, the most appropriate statistical analyses to establish a significant difference was a two tailed t-test (Bryman & Bell, 2003). A two-tailed t-test was then run to demonstrate if the difference between the two sets of results was significant for each unit.
The results for all units from both 2008\_2009 (prior to the evaluation tool being used) and 2009\_2010 (using the evaluation tool) are outlined in Table 2. The units are sorted in ascending order of the summative evaluation score from 2009\_2010. From Table 2, it would appear that using the VLE tool to encourage reflection had, on average, a significant impact on the SETs collected from the QA department.

However, as noted earlier, there were two distinct groups of reflective practitioners found within the group, and the following two tables outline those results.

From Tables 3 and 4, it seems as if those that participate in more advanced levels of reflection (i.e. pedagogic as opposed to surface) tend to not only score higher on average, but also have a greater positive change between last year and this year's evaluation scores.

### Table 1. Units and Student Numbers.

<table>
<thead>
<tr>
<th>Unit</th>
<th>Year</th>
<th>Total Student Response</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2008_2009</td>
<td>2009_2010</td>
</tr>
<tr>
<td>Business A</td>
<td>1</td>
<td>16</td>
</tr>
<tr>
<td>Business B</td>
<td>2</td>
<td>8</td>
</tr>
<tr>
<td>Business C</td>
<td>3</td>
<td>14</td>
</tr>
<tr>
<td>Business D</td>
<td>2</td>
<td>15</td>
</tr>
<tr>
<td>Business E</td>
<td>2</td>
<td>9</td>
</tr>
<tr>
<td>Business F</td>
<td>1</td>
<td>10</td>
</tr>
<tr>
<td>Countryside and environment A</td>
<td>3</td>
<td>17</td>
</tr>
<tr>
<td>Countryside and environment B</td>
<td>2</td>
<td>80</td>
</tr>
<tr>
<td>Extended foundation degree A</td>
<td>0</td>
<td>5</td>
</tr>
<tr>
<td>Extended foundation degree B</td>
<td>0</td>
<td>39</td>
</tr>
<tr>
<td>Veterinary nursing A</td>
<td>3</td>
<td>8</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>221</strong></td>
<td><strong>192</strong></td>
</tr>
</tbody>
</table>

### Table 2. Results Across All Units.

<table>
<thead>
<tr>
<th>Unit</th>
<th>2008_2009</th>
<th>2009_2010</th>
<th>Change</th>
<th>t-Test</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Total Student Response</td>
<td>Overall Score</td>
<td>Total Student Response</td>
<td>Overall Score</td>
</tr>
<tr>
<td>Business A</td>
<td>16</td>
<td>2.89</td>
<td>19</td>
<td>3.16</td>
</tr>
<tr>
<td>Countryside and environment A</td>
<td>17</td>
<td>3.40</td>
<td>26</td>
<td>3.31</td>
</tr>
<tr>
<td>Extended foundation A</td>
<td>5</td>
<td>3.40</td>
<td>4</td>
<td>3.50</td>
</tr>
<tr>
<td>Countryside and environment B</td>
<td>80</td>
<td>3.49</td>
<td>20</td>
<td>3.55</td>
</tr>
<tr>
<td>Business C</td>
<td>14</td>
<td>4.06</td>
<td>24</td>
<td>3.88</td>
</tr>
<tr>
<td>Business B</td>
<td>8</td>
<td>2.76</td>
<td>12</td>
<td>4.00</td>
</tr>
<tr>
<td>Extended foundation B</td>
<td>39</td>
<td>2.60</td>
<td>26</td>
<td>4.04</td>
</tr>
<tr>
<td>Business D</td>
<td>15</td>
<td>3.98</td>
<td>26</td>
<td>4.19</td>
</tr>
<tr>
<td>Business F</td>
<td>10</td>
<td>3.32</td>
<td>10</td>
<td>4.20</td>
</tr>
<tr>
<td>Veterinary nursing A</td>
<td>8</td>
<td>3.51</td>
<td>12</td>
<td>4.33</td>
</tr>
<tr>
<td>Business E</td>
<td>9</td>
<td>3.43</td>
<td>13</td>
<td>4.54</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>221</strong></td>
<td><strong>3.35</strong></td>
<td><strong>192</strong></td>
<td><strong>3.88</strong></td>
</tr>
</tbody>
</table>

*indicates significance (p < .20).
**indicates high significance (p < .05).
As summative SETs directly measure the quality of instruction (Barth, 2008), and those who benefit most from any improvement in teaching quality are the best to provide such information (Pratt, 1997, p. 35), the results of this study indicate that faculty members involved in reflective practice show improvements in their teaching quality, as indicated by the summative student evaluation scores. This is a positive finding, as the goal of both reflective practice and SETs is to improve teaching. It is clear from the results above that, on average, there was a significant increase in SETs from one year to the next. It is also demonstrated, using Tables 3 and 4, that on average, deeper (pedagogic) reflective practices also generated a greater increase in student evaluations.

The results from the unit Extended Foundation B within Table 3 stood out as a unit whose results were different than the other units from within that group. The transcripts for this faculty member were reviewed to ensure that this unit was placed within the correct category. It was found that this faculty member used the weekly SET tool to gauge the students grasp of the information each week, and any lecture that the students indicated they struggled with was reviewed the following week to ensure the students then understood the material. While the

### Table 3. Results of Units with Surface Level Reflection.

<table>
<thead>
<tr>
<th>Unit</th>
<th>2008–2009</th>
<th>2009–2010</th>
<th>Change</th>
<th>t-Test</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Total</td>
<td>Overall</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Student</td>
<td>Score</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Response</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Countryside and</td>
<td>17</td>
<td>3.40</td>
<td>0.09</td>
<td>0.832</td>
</tr>
<tr>
<td>environment A</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Extended foundation A</td>
<td>5</td>
<td>3.40</td>
<td>0.10</td>
<td>0.798</td>
</tr>
<tr>
<td>Countryside and</td>
<td>80</td>
<td>3.49</td>
<td>0.06</td>
<td>0.856</td>
</tr>
<tr>
<td>environment B</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Extended foundation B</td>
<td>39</td>
<td>2.60</td>
<td>1.44</td>
<td>0.000**</td>
</tr>
<tr>
<td>Total</td>
<td>141</td>
<td>3.22</td>
<td>0.38</td>
<td>0.002**</td>
</tr>
</tbody>
</table>

### Table 4. Results of Units with Pedagogic Level Reflection.

<table>
<thead>
<tr>
<th>Unit</th>
<th>2008–2009</th>
<th>2009–2010</th>
<th>Change</th>
<th>t-Test</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Total</td>
<td>Overall</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Student</td>
<td>Score</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Response</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Business A</td>
<td>16</td>
<td>2.89</td>
<td>0.27</td>
<td>0.444</td>
</tr>
<tr>
<td>Business C</td>
<td>14</td>
<td>4.06</td>
<td>0.19</td>
<td>0.705</td>
</tr>
<tr>
<td>Business B</td>
<td>8</td>
<td>2.76</td>
<td>1.24</td>
<td>0.046</td>
</tr>
<tr>
<td>Business D</td>
<td>15</td>
<td>3.98</td>
<td>0.21</td>
<td>0.160*</td>
</tr>
<tr>
<td>Business F</td>
<td>10</td>
<td>3.32</td>
<td>0.88</td>
<td>0.009**</td>
</tr>
<tr>
<td>Veterinary nursing A</td>
<td>8</td>
<td>3.51</td>
<td>0.82</td>
<td>0.029**</td>
</tr>
<tr>
<td>Business E</td>
<td>9</td>
<td>3.43</td>
<td>1.11</td>
<td>0.000**</td>
</tr>
<tr>
<td>Total</td>
<td>80</td>
<td>3.42</td>
<td>0.62</td>
<td>0.000**</td>
</tr>
</tbody>
</table>
students made no qualitative comments on the summative evaluations about this unit, it could be assumed that their positive response to the unit was because of the faculty member’s increased time spent on making sure they understood the material. This is particularly important to these types of students, as they are often younger students who have struggled with classroom materials academically, as it is a bridging programme for entrance to the university.

Overall, the results suggest that the quality of teaching improved, on average, for all reflective practitioners, as demonstrated by increased year on-year summative SETs, and improved even more significantly in those faculty members who demonstrated higher levels of reflection.

SUMMARY

The chapter has discussed the use of weekly SETs in a formative fashion via the VLE at a rural university college in the United Kingdom. The researchers have outlined some of the arguments for and against the use of summative SETs, and the benefits of using them formatively. Finding an effective and efficient means of collecting student feedback from both the student and faculty perspective is crucial, and it was proposed that collecting feedback via the VLE addressed this. Such an evaluation conducted utilising the VLE also provided a ‘safe’ environment for continual feedback for faculty members who felt uncomfortable asking for feedback in the classroom environment, or who perhaps felt they were not experienced enough to gauge student response.

From the student perspective, they found the tool a useful means to communicate and provide immediate anonymous feedback directly to the faculty member, and were motivated by seeing the results of their feedback incorporated into the lecture. In this way, the students were a part of the learning environment, and were positive about the impact that they might make. However, they were demotivated partly because of the lack of variation in the evaluation tool, and partly because they felt if the faculty member was doing a good job they did not need to positively comment via feedback. Students were, overall, more inclined to comment on negative issues, rather than provide constructive positive feedback.

This research started out as a means to continually access student feedback and serendipitously found it was also an efficient means to collect data for reflection-on-action. Being a reflective practitioner is considered a pinnacle of teaching practice, but often the process of collecting information upon which to reflect can be very time consuming. The VLE provided an efficient platform off which to reflect, leading to further investigation on what impact this reflection had on the students within the classroom.

The results suggest that not only does reflection encourage faculty members to improve teaching, but that this improvement can be observed by the students as shown by a significant increase in student summative evaluations. As students perceive the main benefit of conducting evaluations of teaching is an increase in teaching quality, it would seem that faculty reflection on their teaching is beneficial in the minds of those on the receiving end - the students. This is a positive finding, as the goal of both reflective practice and SETs is to improve teaching, and the use of the VLE facilitated both in this learning environment.

Further research should be conducted to see if these findings can be generalised across different universities, as well as different countries or cultural groups. It would be desirable to replicate the research in a setting with larger unit that have a lot more student enrolments to get a more robust sample size. Other future research could investigate if other means of encouraging reflection, other than formative SETs, also improve summative evaluations.
NOTE

1. “unit of study” in Australia is equivalent to a “course” in North America and “module” in the UK.

ACKNOWLEDGEMENTS

This study began as part of the work of the Aspire Development Fellowship Award at Harper Adams University College, and partially funded by the Aspire Development Award Scheme which aims to enhance teaching and student learning. The authors are particularly grateful for the support of the eLearning team, especially the eLearning Coordinator Dr. Henry Keil’s counsel and comments, as well as the volunteers who participated in the year-long study, without which this project would not have been possible. The authors would also like to thank Dr. Stephen Bostock of Keele University for his advice and mentoring during the duration of the project.

REFERENCES


