Preliminary analysis of students’ perceptions of feedback in a New Zealand University

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Abstract

Feedback to students is an important feature of assessment in higher education. It can be a powerful mechanism for enhancing student learning and motivation. Constructive and timely feedback guides students to improve on a continuous basis in the process of their tertiary education and also has a significant impact on their overall academic achievements. The importance of feedback and its relationship to learning have been documented by several leading authors on higher education learning. Survey based research was conducted in a New Zealand university to explore students perception of the feedback given to them on their formative assessments. Three aspects related to feedback were examined: quality of feedback, improvement of performance, and need for feedback. Preliminary results from this study will be presented.

Introduction

Reforms in universities are appearing in various forms that aim to contribute to the quality of learning and teaching. In the pursuit of efforts to enhance student learning, paying attention to feedback is one aspect that plays a central role in understanding the relationship between student progress and achievement (Weaver, 2006, Bandura, 1991; Fedor, 1991). Feedback on learning from students and teachers is also one of the key areas of concern for NZ universities as reported in a recent research (VUW, 2009). Students are paying customers of tertiary institutions and part of their demands for quality education is receiving feedback for assessments and coursework. Also, in a recent decade, much emphasis has been made to shift from teacher to student-centred learning (Rust, 2002). Emphasis on student-centred learning is part of the global quality movement that seeks to address accountability in all aspects of higher learning (Leckey & Neill, 2001). One aspect of the quality accountability by universities is the quality of feedback that is given through formative assessments. In a recent empirical study, Retna, Chong & Cavana (2009) also emphasised the importance of feedback to student satisfaction and learning in tutorials.

According to Cross (1996), students, regardless of the subject discipline, need feedback from their assessments in order to know about their accomplishment and how close they are towards their learning goal. Though assessment designs vary from one learning institution to another they are used for two purposes: firstly to engage students to produce work that reflects their in-depth learning and understanding of

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concepts/topic over a period of time and secondly to avoid regurgitation of factual information that is so evident in examination (Gibbs, 2006). Mindful of these two purposes this paper briefly reviews the literature on feedback and its importance in relation to student learning. This is followed by a preliminary quantitative analysis of students’ perception on feedback in four areas: quality of feedback, improvement of performance, perception of feedback and students expectation of rights.

**Literature Review**

One feature of the constructivist paradigm explains that individuals construct their own meaning and knowledge by actively engaging in the learning process. This construction of knowledge by individuals is further supported by Vygotsky, who claims that individuals’ knowledge construction can be further expanded and improved under the guidance of capable adults or peers (Vygotsky, 1978, p.86). In universities, lecturers or tutors assume the role of providing guidance to students through the means of feedback in formative assessments. The importance of a carefully well planned feedback that aims to improve student learning has been documented by several studies (Weaver, 2006, Stefani, 1998, Falchikov, 1995, Sadler, 1989).

Many definitions of feedback exist and the numerous interpretations explain the importance and the complexity involved in understanding what the term feedback means to academics in higher education. Taking a general or a broad perspective, feedback is defined as ‘all dialogue to support learning in both formal and informal situations’ (Askew and Lodge, 2000). A more specific one in terms of understanding learning is given by Ramaprasad as ‘feedback is information about the gap between the actual level and the reference level of a system parameter which is used to alter the gap in some way’ (1983, p. 4). The review of some definitions of feedback is important as it helps clarify the various components involved in the term ‘feedback’.

For the purpose of this research, we define feedback as a process that guides students to close the gap between their current and desired performance. Our research questions focused around this explanation and now we turn to discuss some useful insights on feedback.

Several studies on formative assessment have indicated that learning and feedback are inseparable (Orsomond, Merry & Reiling, 2000) and that feedback provided through formative assessments do motivate students and enhance their learning. Positive feedback can have significant impact on student learning (Nicol &Macfarlane-Dick, 2006, Young, 2000). Some studies show increased level of motivation through feedback as it helps them in two ways: reinforcing and recognising their efforts in the process of their learning (Hyland, 2000; Marzano, Pickering & Pollock, 2001). While positive feedback is noted for its enhancing effect, negative feedback on the contrary does affect students’ engagement and motivation (Alton-Lee, 2003). It is also advocated by some authors (for example, Orsomond, Merry and Reiling, 2002), that providing positive and negative feedback should lead students to a deeper understanding of the topic/subject.

The timing of providing feedback has gathered good discussion in the literature on enhancing student learning. The main aim of feedback is to increase students’ understanding of their knowledge or skill in a specific or general area of content that
is part of the learning objectives and outcomes. One important consideration is when to give students their feedback and what is a good timeframe for it. One view strongly advocates that feedback is only useful to students if it is given in a timely fashion (Weaver, 2006). This is to avoid students making further incorrect assumptions, confusions or errors as feedback is conceptualised as reinforcement (Gibbs, 2002; Sullivan, Schutz & Baker, 1971; Paige, 1966). On the contrary there are studies that claim that delayed feedback is more useful than immediate feedback for learning and retention of knowledge and skills for students (Butler, Karpicke & Roediger, 2007). Other studies (for example, Butler & Henry, 2008) that suggest the optimal timing of giving feedback both immediate and delayed had positive learning impact for students. The importance of giving timely feedback is still a cause for concern in higher education as in some instances students only get their feedback after the completion of the course (Gibbs, 2006). To overcome this issue, formative assessment needs to be planned in such a manner where students can get their feedback and use it for improving their learning before their final examination or end of course (Trotter, 2006). The use of technology can aid in the provision of timely feedback (Ribchester, France & Wakefield, 2008).

A recent survey in Australia showed that feedback is one of the least satisfactory experiences among students. According to William (2007), feedback must enable students to act on the current or future learning outcomes (William & Black, 1996). He further argues that it is important for markers to ensure that feedback is acted upon by students in order to close the feedback loop (Sadler, 1989). Failure to close the loop by either students or the marker may result in feedback being considered as void. Though feedback places much demand on both teachers and students, it is a worthy effort in promoting learning in higher education (Hattie & Timperly, 2007).

Just as feedback is crucial for learning, the quality aspect is equally important. Comprehensibility (Higgins, 2006) poor handwriting (Race, 2001), inadequate information (Carless, 2006), judgemental comments (James, McInnis and Devlin, 2002) and grading without any written comments (Swan & Arthur, 1998) are few examples that affect the quality of feedback to students. The aim of feedback is to facilitate learning in a manner that students are able to understand their current ability of doing a particular assessment and to further improve and bridge the gap between their actual knowledge and required performance. The above discussion suggests that feedback is being viewed as an important feature for learning and improvement by students. Thus, the quality aspect must be taken seriously in the process of providing effective feedback.

It is clear that if universities are to improve the quality of teaching and learning, special attention must be paid to feedback. Although there are differences of opinion about some aspects— timing being the main area of disagreement – there is broad consensus about the importance and value of effective feedback. However, achieving ‘effective feedback’ is no simple matter. There are issues on the teaching side that have to be addressed. For one thing, feedback is time-consuming, and time is not something which contemporary universities lavish upon their teachers. However we also need to examine the student’s perspective. What does the student regard as effective and useful? Although all teachers have themselves been students, we teachers cannot presume that we truly understand what our students want, or don’t want, from feedback. Research is necessary, and this paper describes a project that
attempts to gauge student perceptions of the different dimensions or aspects to feedback.

**Method**

A survey questionnaire was used in this research as the primary tool for collecting data. In an educational setting, the use of a questionnaire is a useful approach in terms of factors such as time and efficiency. The anonymity of the questionnaire allows students’ to respond with ease and comfort without the perceived fear of being penalised in their assessments. In order to identify some attributes experienced by the students on receiving feedback on their assessment, a small scale pilot study (35 students) was conducted with a third year management course. Using the literature on student feedback and also from the analysis of the pilot study, a questionnaire was derived focusing on three main dimensions: improvement of performance, the need for feedback and quality of feedback.

It is hypothesised that improvements in each of these dimensions will lead to improved student satisfaction with the feedback received from their assessed work related to their management courses. These hypotheses can be summarised in the theoretical framework (Cavana, Delahaye & Sekaran, 2001, pp. 91-95) provided in Figure 1.

![Theoretical framework for assessing students' perceptions of feedback](image)

Figure 1. Theoretical framework for assessing students’ perceptions of feedback

One faculty administrator and one academic, who were not involved in teaching administered the questionnaires with 828 students at a New Zealand university. To avoid the presence of academics and tutors who have been involved in the programme, the survey was conducted during the last lesson of the trimester. Prior permission was sought from lecturers involved in the programme to leave their
classroom before the conducting of the survey. All participants of this research are third year undergraduates and were selected for three reasons: accessibility, large sample and their rich experiences of receiving feedback for their assessments. Though, 828 questionnaires were administered, only 613 were returned.

The questionnaire consisted of three parts and served to fulfil the quantitative, qualitative and the demographic profile for analysis. The first part had 20 questions and related to the quality of feedback, improvement of performance, and students need feedback. The second part had two questions in that required students to suggest specific things that feedback has helped their learning and also to list two to three types of their preferences for feedback. The final part of the questionnaire gathered demographic information such as age, nationality/ethnicity, and gender. Demographic details of the respondents to the research are summarised in Table 1.

**Table 1**

<table>
<thead>
<tr>
<th>Demographic information regarding the respondents</th>
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<tbody>
<tr>
<td><strong>Age Group (years)</strong></td>
</tr>
<tr>
<td>17 or less</td>
</tr>
<tr>
<td>18 - 20</td>
</tr>
<tr>
<td>20 - 25</td>
</tr>
<tr>
<td>25 - 30</td>
</tr>
<tr>
<td>30 + above</td>
</tr>
<tr>
<td><strong>Total</strong></td>
</tr>
<tr>
<td><strong>Nationality / Ethnicity</strong> *</td>
</tr>
<tr>
<td>NZ Maori</td>
</tr>
<tr>
<td>Pacific Islander</td>
</tr>
<tr>
<td>NZ European/Pakeha</td>
</tr>
<tr>
<td>Chinese</td>
</tr>
<tr>
<td>Other</td>
</tr>
<tr>
<td><strong>Total</strong></td>
</tr>
<tr>
<td><strong>Gender</strong></td>
</tr>
<tr>
<td>Male</td>
</tr>
<tr>
<td>Female</td>
</tr>
<tr>
<td><strong>Total</strong></td>
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</tbody>
</table>

* includes some double selections

**Preliminary data analysis**

The three dimensions of students’ satisfaction with feedback outlined above (see Figure 1), were used to test the validity of the data collected. The data was analysed on the computer with SPSS (Statistical Package for the Social Sciences, v16). The factor analysis of the responses to all 19 items in the questionnaire resulted in four independent factors.
An analysis of items loading heavily on each factor revealed that two of the dimensions in Figure 1 corresponded closely to two factors that emerged from the factor analysis of the data, but the third dimension was separated into two factors. These can be summarised in Table 2.

Table 2
Correspondence between theoretical dimensions and factors from data analysis

<table>
<thead>
<tr>
<th>Theoretical Dimension</th>
<th>Factor</th>
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<tbody>
<tr>
<td>1   Improvement of performance</td>
<td>2 Improvement of work quality</td>
</tr>
<tr>
<td>2   Need for feedback</td>
<td>3 Improvement of results</td>
</tr>
<tr>
<td>3   Quality of feedback</td>
<td>4 Quality of feedback</td>
</tr>
</tbody>
</table>

The internal consistency or construct reliability of the four factors was tested using Cronbach's alpha. The results for Factor 1 (6 items) was $\alpha = 0.786$, Factor 2 (5 items) was $\alpha = 0.750$, Factor 3 (4 items) was $\alpha = 0.666$ and Factor 4 (4 items) was $\alpha = 0.482$. The reliability values for Factors 1 to 3 were above the commonly used threshold of $\alpha > 0.60$ for exploratory research (Hair et al., 2006, p. 137). However, the reliability of Factor 4 is below the acceptable level, but has been retained at this preliminary stage.

The correlation between each factor and item 20, the student’s overall satisfaction with the feedback given in their management courses, was tested. The results, summarized in Table 3, show significant positive correlations between overall satisfaction with feedback (item 20) and three factors (1, 3 & 4)- improvement of work quality, improvement of results, and quality of feedback. However, there is no statistical relationship between ‘satisfaction with feedback’ and the importance students attach to the feedback (Factor 2), hence rejecting the second hypothesis (H2). This is an interesting result, although on further reflection it is quite plausible, suggesting some changes to our theoretical framework.

Improvement of work quality appears to have the strongest correlation with overall satisfaction with feedback, followed by improvement of results, and then by quality of feedback. This confirms the first (H1) and third (H3) hypotheses summarized in Figure 1.

Factors 1 and 3 are significantly correlated with one another, suggesting some multicollinearity may be present. This is not surprising since Factors 1 and 3 were derived from the single theoretical dimension, ‘improvement of performance’.
Table 3

Pearson’s Correlation Coefficients

<table>
<thead>
<tr>
<th></th>
<th>Factor 1</th>
<th>Factor 2</th>
<th>Factor 3</th>
<th>Factor 4</th>
<th>Item 20</th>
</tr>
</thead>
<tbody>
<tr>
<td>Factor 1 – Improvement of work quality</td>
<td>1.000</td>
<td>.186</td>
<td>.535</td>
<td>.035</td>
<td>.640</td>
</tr>
<tr>
<td>Factor 2 – Need for feedback</td>
<td>.186</td>
<td>1.000</td>
<td>.383</td>
<td>.025</td>
<td>.053</td>
</tr>
<tr>
<td>Factor 3 – Improvement of results</td>
<td>.535</td>
<td>.383</td>
<td>1.000</td>
<td>-.006</td>
<td>.329</td>
</tr>
<tr>
<td>Factor 4 – Quality of feedback</td>
<td>.035</td>
<td>.025</td>
<td>-.006</td>
<td>1.000</td>
<td>.104</td>
</tr>
<tr>
<td>Item 20 – Overall, I was satisfied with feedback given in my management courses</td>
<td>.640</td>
<td>.053</td>
<td>.329</td>
<td>.104</td>
<td>1.000</td>
</tr>
</tbody>
</table>

*. Correlation is significant at the 0.01 level (1-tailed).

Conclusions

It must be emphasised that these results are ‘preliminary’ as the quantitative and qualitative analysis of the data collected has not yet been completed. Moreover, space does not permit a discussion of the qualitative analysis. The subject is undeniably important, and timely, but further analysis, and research, needs to be done. Nevertheless, the preliminary results emphasise the importance of high quality feedback to students providing opportunities for improving the quality of their work, and the improvement of their results. This will lead to greater student learning and satisfaction with the feedback they receive on their tertiary education courses.

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References


