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Undergraduate management 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. Constructive and timely feedback guides students to improve on a continuous basis in the process of their tertiary education. This paper outlines an exploratory study based on survey research, which was conducted on a large sample of undergraduate students on management courses in a New Zealand university. Following a review of the relevant literature a conceptual model was developed using systems thinking principles. A questionnaire was designed consisting of 20 closed Likert questions and two open questions designed to explore students' perceptions of the feedback given to them on their formative assessments. Quantitative and qualitative analyses were undertaken of the data collected from over 600 valid responses. The quantitative analysis consisted of descriptive statistics, an exploratory factor analysis and Pearson's correlation analysis. The four main factors to emerge were: improvement of work quality, improvement of results, need for feedback and quality of feedback. The qualitative analysis was based on these themes. The results of these analyses are discussed in this paper. This paper attempts to contribute to the ongoing discussion regarding the better understanding of the complex relationships between feedback and student learning in tertiary level management education.

Keywords: feedback, formative assessment, management education, student learning, survey analysis, New Zealand university

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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 (Bandura, 1991; Fedor, 1991; Weaver, 2006; Espasa & Meneses, 2010). Feedback on learning from students and teachers is also one of the key areas of concern for New Zealand (NZ) universities as reported in recent research (VUW, 2009). Students are paying customers of tertiary institutions (Driscoll & Wicks, 1998; Pitman, 2000; Maringe, 2006; Molesworth, Nixon, & Scullion, 2009). Although there is an ongoing debate on whether students should be treated as customers (Svenson & Wood, 2007; Ramachandran, 2010), part of their demands for quality education is receiving feedback for assessments and coursework. Also, in recent times, much emphasis

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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, and 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 goals. Although assessment designs vary from one learning institution to another, they are used for two purposes: first, to engage students to produce work that reflects their in-depth learning and understanding of concepts/topic over a period of time; and, second, 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. A conceptual model is developed based on this literature review. Next, an empirical survey of undergraduate management students at an NZ university is outlined. This is followed by a quantitative analysis of the students' perceptions on feedback. Four themes emerge from this analysis: improvement of work quality, improvement of results, need for feedback and quality of feedback. A qualitative analysis based on these themes is then undertaken. Finally, some concluding comments are provided.

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 (1978: 86), who claims that individuals' knowledge construction can be further expanded and improved under the guidance of capable adults or peers. In universities, lecturers or tutors assume the role of providing guidance to students through the means of feedback in formative assessments. The importance of carefully well-planned feedback that aims to improve student learning has been documented by several studies (Sadler, 1989; Falchikov, 1995; Stefani, 1998; Weaver, 2006).

Many definitions of feedback exist and numerous interpretations explain the importance and 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 & Lodge, 2000). A more specific definition in terms of understanding learning is given by Ramaprasad (1983: 4) 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'. 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 (Orsmond, Merry, & Reiling, 2000) and that feedback provided through formative assessments do motivate students and enhance their learning (Yorke, 2003). Positive feedback can have significant impact on student learning (Young, 2000; Nicol & Macfarlane-Dick, 2006). Some studies show increased levels 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

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contrary does diminish students' engagement and motivation (Alton-Lee, 2003). It is also advocated by some authors (e.g., Orsmond, Merry, & 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 (Tshibalo, 2005; Trotter, 2006; Hattie & Timperley, 2007). 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 (Paige, 1966; Sullivan, Schutz, & Baker, 1971; Gibbs, 2002). By contrast, 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 (e.g., Butler & Henry, 2008) suggest that the optimal timing of giving feedback, both immediate and delayed, has positive learning impacts 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 completion of their courses (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 at the end of the 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 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. Although feedback places much demand on both teachers and students, it is a worthy effort in promoting learning in higher education (Hattie & Timperley, 2007).

Just as feedback is crucial for learning, the quality aspect is equally important. Comprehensibility, poor handwriting (Race, 2001), inadequate information (Carless, 2006), judgemental comments (James, McInnis, & Devlin, 2002) and grading without any written comments (Swann & Arthur, 1998) are a 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 a broad consensus about the importance and the value of effective feedback. However, achieving 'effective feedback' is not a 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 that contemporary universities lavish upon their teachers. However, we also need to examine students' perspectives. What do students 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 do not want from feedback. Research is necessary, and this paper describes an exploratory project that attempts to gauge students' perceptions of the different aspects to feedback.

Based on this literature review, we have developed the conceptual model outlined in Figure 1. This diagram has been constructed using systems thinking and causal loop diagramming conventions

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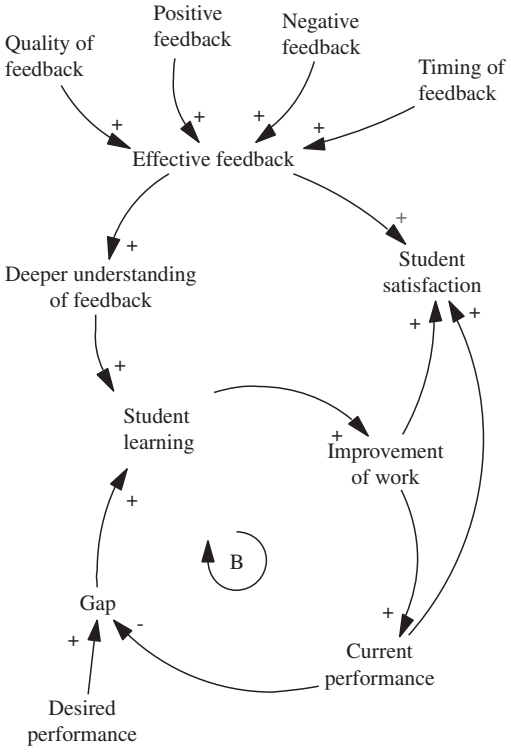

FIGURE 1. CONCEPTUAL MODEL RELATED TO FEEDBACK TO STUDENTS FROM FORMATIVE ASSESSMENTS

outlined, for example, in Maani and Cavana (2007) or Sterman (2000). The links between the variables or concepts represent causal relationships in positive (+) or negative (−) directions. The balancing loop (B) represents a regulating feedback loop, whereby the gap between students' actual and desired performances is corrected over time, following the influences of effective feedback leading to deeper understanding and enhanced student learning.

METHOD

An exploratory 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 a 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 students on receiving feedback on their assessment, a small-scale pilot study (85 students) was conducted with a third-year management course at an NZ university. Using the literature on student feedback outlined in the previous section and also from the analysis of the pilot study, a questionnaire was developed.

The questionnaire consisted of three parts and served to fulfil the quantitative, qualitative and demographic profiles for analysis. The first part had 20 questions that related to the various aspects of feedback to students identified in Figure 1, including one key question on the overall satisfaction of feedback given on management courses. A 5-point itemised Likert rating of strongly disagree, disagree, neutral, agree and strongly agree were used for data collection (1 = 'strongly disagree'; 5 = 'strongly agree').

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TABLE 1. DEMOGRAPHIC INFORMATION REGARDING THE RESPONDENTS

Age group (years)		
17 or less	6	1%
18–20	383	63%
20–25	182	30%
25–30	21	3%
30+	15	2%
	607	100%
Nationality/ethnicity[a]		
NZ Maori	54	9%
Pacific Islander	20	3%
NZ European/Pakeha	365	57%
Chinese	63	10%
Other	133	21%
	635	100%
Gender		
Male	277	46%
Female	331	54%
	608	100%

Note. [a] Includes some double selections

The second part had two questions that required students to suggest specific things where feedback had helped in 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.

One faculty administrator and one academic, who were not involved in teaching, administered the questionnaires with 828 students on undergraduate management courses in the commerce faculty at an NZ university. To avoid the presence of academics and tutors who had 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 survey was conducted. All participants of this research were third-year undergraduates and were selected for three reasons: accessibility, large sample and their rich experiences of receiving feedback for their assessments. Although 828 questionnaires were administered, only 613 were returned, a response rate of 74%.

Demographic details of the respondents to the research are summarised in Table 1.

QUANTITATIVE DATA ANALYSIS

The data was analysed using SPSS (Statistical Package for the Social Sciences, v16). The quantitative analysis consisted of three parts:

- Descriptive statistics of the survey items.
- Exploratory factor analysis to identify any major factors.
- Correlation analysis to test the relationships between the main factors and students' overall satisfaction with feedback.

Descriptive statistics

A summary of the descriptive statistics is provided in Table 2. This includes, for each question, the percentage of responses for each category from strongly disagree (1) to strongly agree (5), the number of valid responses for each item (*N*), the mean score of the responses (from 1 to 5) and the standard deviation (SD) for each item. The items are presented in Table 2 from the highest to lowest mean response.

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Table 2. Summary of the descriptive statistics for each survey item

Item	In this course, I have found that …	Percentages					Responses (N)	Mean	SD
		Strongly disagree (1)	Disagree (2)	Neutral (3)	Agree (4)	Strongly agree (5)			
13	I always read the feedback on my assignments	1	2	5	32	61	613	4.5	0.72
9	Feedback is important to me	0	3	8	37	51	609	4.4	0.77
14	It is more important for me to see the reason why I received a particular grade	0	2	10	39	49	610	4.4	0.75
12	I deserve feedback when I put so much effort in	0	2	12	35	50	611	4.3	0.79
19	I always collect my assignments	1	5	9	35	50	611	4.3	0.86
2	Feedback tells me what I need to do to improve my performance	0	2	7	53	37	612	4.2	0.71
11	I use feedback to improve my results	1	4	18	47	29	604	4.0	0.86
3	Feedback tells me what the expectations of the tutors are	1	5	17	56	21	612	3.9	0.80
8	Feedback helped me focus on areas I could improve	2	6	13	57	21	610	3.9	0.87
1[a]	Feedback is only useful when it is positive	8	8	12	46	25	611	3.7	1.17
10	I feel encouraged and supported by the feedback	2	5	33	44	16	609	3.7	0.87
4	Feedback made me think further about the topics	2	9	28	48	14	611	3.6	0.89
5	Feedback was provided that I could use in future assignments/courses	3	13	21	48	15	613	3.6	0.99
6	Critical feedback was given on the quality of the work	2	15	26	50	7	611	3.4	0.90
20	Overall, I was satisfied with feedback given in my management courses	5	13	26	48	8	613	3.4	0.99
7	Feedback showed me how to critically assess my work	2	15	34	42	6	607	3.4	0.89
18	Marker offered opportunities to clarify their feedback	6	19	31	36	7	605	3.2	1.04
17[a]	Gave feedback that I couldn't understand	5	20	31	35	6	599	3.2	1.00
16[a]	Feedback was inconsistent or contradictory	7	21	42	26	3	609	3.0	0.95
15[a]	The grade is more important to my learning than feedback	18	23	36	20	3	609	2.7	1.08

Note. [a] Item reverse coded

The items receiving the highest mean responses were item 13 'I always read the feedback on my assignments' (mean = 4.5); item 9 'Feedback is important to me' and item 14 'It is more important for me to see the reason why I received a particular grade' (mean = 4.4); item 12 'I deserve feedback when I put so much effort in' and item 19 'I always collect my assignments' (mean = 4.3); and item 2 'Feedback tells me what I need to do to improve my performance' (mean = 4.2). The mean response to the lowest items were very close to neutral (3.0), including the key question item 20 'Overall, I was satisfied with feedback given in my management courses' (3.4)! Note, items 1, 15, 16 and 17 have been reverse coded to provide values comparable with the other items. However, three of these items (i.e., 15, 16 and 17) did provide the three lowest mean responses, around the neutral mark.

Exploratory factor analysis

An exploratory factor analysis of the responses to the 19 independent items in the questionnaire resulted in four independent factors. These factors were called improvement of work quality (Factor 1), improvement of results (Factor 2), need for feedback (Factor 3) and quality of feedback (Factor 4). The rotated factor loadings are listed in Table 3.

The internal consistency or construct reliability of the four factors was tested using Cronbach's α. The results for Factor 1 (six items) was $\alpha = 0.786$, Factor 2 (five items) was $\alpha = 0.750$, Factor 3 (four items) was $\alpha = 0.666$ and Factor 4 (four items) was $\alpha = 0.482$. The reliability values for Factors 1–3 were above the commonly used threshold of $\alpha > 0.60$ for exploratory research (Hair, Black, Babin, Anderson & Tatham, 2006: 137). However, the reliability of Factor 4 is below the acceptable level, but has been retained for this exploratory research.

Correlation analysis

The correlation between each factor and item 20, the students' overall satisfaction with the feedback given in their management courses, was tested. The results, summarised in Table 4, show significant positive correlations between overall satisfaction with feedback (item 20) and three factors (1, 2 and 4) – improvement of work quality, improvement of results and quality of feedback. However, there does not appear to be any statistical relationship between 'satisfaction with feedback' and the importance students attach to the feedback (Factor 3, need for feedback). This is an interesting result, although on further reflection it is quite plausible.

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.

Factors 1 (improvement of work quality) and 2 (improvement of results) are significantly correlated with one another, suggesting some multi-collinearity may be present.

QUALITATIVE DATA ANALYSIS

In this section, we provide a qualitative analysis based on the two open questions in the questionnaire that required students to write specific things that feedback has helped their learning and their preferences for the types of feedback. The data were analysed using a content analysis approach (Cavana, Delahaye, & Sekaran, 2001: 171–176). The four themes presented below were developed from the quantitative analysis: improvement of work quality, improvement of results, need for feedback and quality of feedback. An analysis of the comments by theme is provided in Figure 2. This figure indicates that the largest proportion of the comments (30%) were classified as related to improvement of results, 23% related to improvement of work quality, 21% related to need for feedback, 19% related to quality of feedback and a further 7% were miscellaneous comments.

These four themes are further analysed below.

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Table 3. Exploratory factor analysis–rotated factor matrix[a]

Item	Question	Factor 1 Improvement of work quality	Factor 2 Improvement of results	Factor 3 Need for feedback	Factor 4 Quality of feedback
6	Critical feedback was given on the quality of the work	**0.699**			
5	Feedback was provided that I could use in future assignments/courses	**0.636**			
7	Feedback showed me how to critically assess my work	**0.631**			
8	Feedback helped me focus on areas I could improve	**0.516**	0.421		
18	Marker offered opportunities to clarify their feedback	**0.446**			
10	I feel encouraged and supported by the feedback	**0.418**	0.367		
2	Feedback tells me what I need to do to improve my performance		**0.596**		
4	Feedback made me think further about the topics	0.314	**0.543**		
11	I use feedback to improve my results		**0.539**	0.374	
3	Feedback tells me what the expectations of the tutors are		**0.460**		
13	I always read the feedback on my assignments			**0.701**	
14	It is more important for me to see the reason why I received a particular grade			**0.650**	
12	I deserve feedback when I put so much effort in			**0.615**	
9	Feedback is important to me		0.316	**0.555**	
19	I always collect my assignments			**0.493**	
17[b]	Gave feedback that I couldn't understand				**0.611**
1[b]	Feedback is only useful when it is positive				**0.511**
15[b]	The grade is more important to my learning than feedback				**0.383**
16[b]	Feedback was inconsistent or contradictory				**0.339**

Note. Extraction method = principal axis factoring; rotation method = varimax with Kaiser normalization.
Bold figures indicate factor loadings of >0.3. Factor loadings of '0.3 are significant for sample sizes of 350 or greater' (Hair et al., 2006: 128).
[a] Rotation converged in six iterations.
[b] Recoded (reverse) negatively worded scale items.

Table 4. Pearson's correlation coefficients

	Factor 1	*Factor 2*	*Factor 3*	*Factor 4*	*Item 20*
Factor 1 – Improvement of work quality	1.000	0.535*	0.186*	0.035	0.640*
Factor 2 – Improvement of results	0.535*	1.000	0.383*	−0.006	0.329*
Factor 3 – Need for feedback	0.186*	0.383*	1.000	0.025	0.053
Factor 4 – Quality of feedback	0.035	−0.006	0.025	1.000	0.104*
Item 20 – Overall, I was satisfied with feedback given in my management courses	0.640*	0.329*	0.053	0.104*	1.000

Note. *Correlation is significant at 0.01 level (one-tailed).

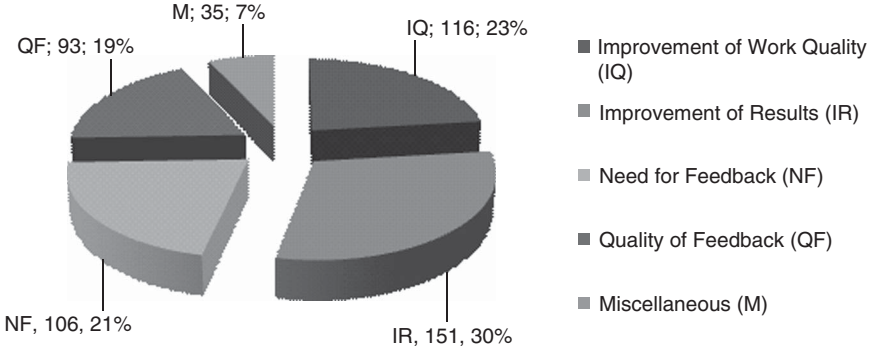

Figure 2. Summary of comments by theme

Improvement of work quality

The quantitative results showed a clear indication that the students have experienced some improvement in their performance in their formative assessments (see items 2, 5 and 8 in Table 2). The results in Table 4 also show that there is a highly significant positive correlation between improvement of work quality and students' overall 'satisfaction with feedback'. This clearly signals the importance of feedback and reinforces the notion that knowledge and learning can be enhanced under the guidance of capable adults, in this instance, the lecturers and tutors who provide the feedback (Vygotsky, 1978). Also for feedback to be effective, it has to be relevant and offer suggestions for improvement (Brown, Bull, & Pendlebury, 1997). It is also clear from the qualitative results that feedback has helped students to improve their learning and has led to improved performance and achievement. Some examples from the survey:

Improved the quality of my assignment.
Helped me to avoid the same problem again in the next assignment.
Helped me to know what is expected of me, how to improve my learning and why I got that grade and helped me see where my weaknesses are.

It must be noted that there is great emphasis on the importance of feedback for students' improvements at all levels by the university. It is also reflected in the assessment guide that reads as,

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'marked work should be returned to students with constructive feedback in time to be of use for future assessment items' (VUW, 2009: 3). Giving students an opportunity to act on the feedback is considered as a good practice. Some studies (e.g., Duncan, 2007) claim that students do not read or pay attention to feedback comments, and one possible reason is that students and even teachers view feedback as a separate component from teaching. There is also another view that explains that feedback is just another task of the teacher, thus, owned by the teacher and leads students to undermine the positive effects that students could experience in enhancing their learning (Taras, 2003). Despite such claims, our research shows that most students have integrated feedback into subsequent tasks, which is reflected in the above and other comments from the survey.

Improvement of results

The survey results demonstrated that the improvement of results is highly positively correlated to students' overall 'satisfaction with feedback' (see Table 4). Several studies, for example, Gibbs (1999), have shown that students improve their grades and final results in a significant way that is attributable to feedback provided in their formative assessments. This is also supported by the results of item 11 in Table 2 above. From both students' and teachers' perspectives, the purpose of feedback is to improve learning and results. In this case, it is evident from the comments in the qualitative data as highlighted through the following quotes:

> *Feedback helps in getting better grades and preparing confidently for future assignments and exams.*
> *Yes it has helped me in my assignments. I have improved and I got good grade in my 2nd assignment.*
> *Improving my grade clarifies which area I need to improve and strengthens my weak areas.*
> *Feedback helped me critically discuss theories that I used in my assignments and obtain better grades in other assignments.*

The positive comments show that as an outcome of feedback, students' learning and results improved. This is, perhaps, not surprising as assessment and feedback are integral aspects of students' learning experiences and it suggests that if students act upon feedback, they will benefit in understanding and identifying gaps in their knowledge. The above and other comments also indicate that feedback helps to not only clarify what is expected out of the course, but also to enhance positive beliefs and self-esteem. It shows that students value the feedback (Weaver, 2006) and are capable of self-regulating their learning (Nicol & Macfarlane-Dick, 2006). Feedback helps them to engage with the subject in a 'deep way' (Higgins, Hartley, & Skelton, 2002).

Need for feedback

As discussed earlier in the paper, assessment and feedback are important aspects of student learning experiences (Orsmond, Merry, & Reiling, 2000). Its value has been generally accepted as it is a means whereby student and teacher are linked in the process of understanding and reducing the gap between the current performance and desired goal (Hattie & Timperley, 2007). A review of literature does assert that feedback has significant impact on improving student performance.

However, there are two reasons that could contribute to an understanding of the lack of 'need for feedback' by students. First, some students may focus only on grades/marks for their formative assessments. Second, students may not have considered feedback as a valuable indicator that signals the deviation from the actual and expected standard of performance. Assessment and feedback are crucial aspects that enhance student-learning experiences. This being the case, it would seem necessary to ensure that students use the feedback to improve their learning (Orsmond, Merry, & Reiling, 2000).

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Although the literature provides a definitive picture of the significant impact feedback has on students' performance, it is still unknown why students do not take the opportunities to act upon feedback to improve their learning and performance for future tasks. Nevertheless, some comments from the qualitative data do show that students perceive feedback as a form of guidance to do well and receive better grades in their future assignments:

Helped to know what went wrong and why this mark was given
Determine my overall strengths and weaknesses.
Areas to improve on
Helped to refine future course assignments.

The above comments do imply that students who act upon feedback have benefited in getting better results and helps in the ongoing process and progress of student learning. It is important for students to understand how feedback can support their learning and also how it can help them to develop a 'deep learning' approach that is a skill required for lifelong learning (Higgins, Hartley, & Skelton, 2002).

Quality of feedback

An important and fundamental role of higher education teachers is providing quality feedback for students to enable them to learn from their assessments. As discussed earlier in this paper, feedback does impact on students' performance and motivation (Irons, 2008). Some studies (Swann & Arthur, 1998; Race, 2001) have clearly shown that the quality of feedback is one of the factors that determine whether the student benefits from the feedback provided on assessments. Our research (Table 4) shows that there is small but significant correlation between quality of feedback and overall 'satisfaction with feedback' and the quantitative results are supported by comments such as:

Helped to see where I went wrong.
Gave suggestions to what needs to be done to improve my grades and learning.
Helped me to re-read questions and put my thoughts in the right direction.
Improve areas where I wasn't good. I understand the course better now.

The above comments show that the quality of feedback has helped students to think about their learning and task performance, and have engaged them to understand the task criteria and specified assessment goals. By contrast there are students who have expressed the view that the quality of feedback was of poor quality or could be further improved. Some comments by these students are:

The feedback given was very poor and inappropriate
Feedback was scarce, rushed, unhelpful and very general
Feedback was useful but no opportunity to discuss further on it.
I did not receive enough feedback. Some comments are very general.

Some indications from the above comments are that feedback needs to be specific, in-depth and constructive and needs further clarification. However desirable this may be, it is uncertain whether it will be achieved in a climate of increased demands on staff (e.g., particularly for research) at universities and other institutions of higher learning. Quality feedback, after all, does require considerable time, thought and effort!

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CONCLUSIONS

This paper has examined various aspects of feedback provided to students on their formative assessments, and the satisfaction from this feedback, as expressed by a large sample of undergraduate management students at an NZ university. Quantitative and qualitative analyses were undertaken of the data collected from a short questionnaire administered in the last class of the trimester. Over 600 valid questionnaires were completed, providing considerable quantitative data related to 20 aspects of feedback provided to students. Qualitative analysis was based on the two open questions in the questionnaire that required students to write specific things that feedback has helped their learning and their preferences for the types of feedback.

The quantitative analysis involved the presentation of descriptive statistics of the responses for each item in the questionnaire, an exploratory factor analysis and correlation analysis of the emergent factors with the satisfaction students derived from feedback on their management courses. The emergent factors were improvement of work quality, improvement of results, need for feedback and quality of feedback. The qualitative analysis involved classifying the comments according to these themes, followed by a further content analysis of comments within the themes.

The results indicate that improvement of performance (both work quality and results) and the quality of feedback, lead to higher levels of overall student satisfaction with feedback provided on management courses (by tutors and lecturers).

The major limitation of this research is that it is exploratory and only based on a sample drawn from management courses at a single NZ university. Nevertheless, considerable scope exists for further research in this field, including:

- Further developing the conceptual diagram outlined in this paper.
- Developing further operational definitions for the concepts and variables identified in the conceptual model and questionnaire related to this research.
- Further developing the data collection instrument outlined in this research, including additional testing of it for validity and reliability.
- Undertaking more theoretical and empirical research to find out why students do not always take the opportunities to act upon feedback to improve their learning and performance for future tasks.

Finally, it must be re-stated that this subject is undeniably important, and timely, but further analysis and research needs to be undertaken. The implications of the results outlined in this paper 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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