An Anatomy of Feedback:
A phenomenographic investigation into undergraduate students’ experiences of feedback

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Abstract

Feedback is considered to be a fundamental part of the learning process and is a critical link that connects students’ and teachers’ activities. However, definitions of feedback in the higher education literature are problematic. For example, views of feedback seem to be mechanistic in nature and isolated from the learning context; there is minimal contribution of students’ perspectives in these views; and, there is an assumption on the part of researchers of a common understanding as to what feedback actually is. In addition, the ways in which students respond to feedback are not well understood. Therefore, an objective of this research was to investigate students’ experiences or conceptions of feedback, in order to determine the underlying meaning that feedback has for students. A further objective was to investigate students’ responses or ‘approaches’ to feedback.

Data were collected from 28 undergraduate physiotherapy students via individual, semi-structured interviews and then analysed using a phenomenographic approach in order to determine the ‘what’ or referential aspects, and the ‘how’ or structural aspects, of students’ conceptions of feedback. The focus was on the variation across the data, as well as on the relationships between the different experiences in the data. The ways in which students responded to or approached feedback were also analysed with regard to these relationships.

One main finding of this study was the identification of a superordinate notion across the data of feedback as ‘information’. However, results indicated
that students experienced feedback as ‘information’ in four qualitatively different ways. These differing experiences or conceptions were designated as A: Feedback as ‘telling’, B: Feedback as ‘guiding’, C: Feedback as ‘developing understanding’ and D: Feedback as ‘opening up a different perspective’. These four categories of description represent the outcome space for the research. Each category was subsumed by the next and what was emphasised changed as the categories expanded, demonstrating a relationship of increasing inclusivity and complexity between the categories. Another finding of this study was the variety of factors identified by students as influencing their responses or approaches to feedback. If sufficiently significant, these factors formed barriers to responding to feedback.

Furthermore, results revealed a relationship between students’ conceptions of feedback and their responses or approaches to feedback. The relationship was inverted: the more inclusive the conception of feedback, the less barriers there were to responding to feedback.

Several conclusions emerge from this research. The results of this research validate the assumption made by researchers of a common understanding of feedback as ‘information’. This feedback information, however, is experienced and responded to in differing ways, relating to students’ underlying conceptions of feedback. In presenting students’ voices, this study provides a view of feedback that is integrally connected to students’ learning contexts. This research also has implications for teachers. Understanding how students conceptualise or experience feedback provides teachers with insights on how to engage students with meaningful feedback. Engagement with feedback, including reflecting on feedback, is a crucial part in developing self-regulation of learning.
Acknowledgements

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Chapter One

Introduction
Chapter Outline

In this chapter I relate the personal and professional story behind this research project, along with my rationale for undertaking the research. Some of the terminology used in the research is defined, and from these definitions the perspective that frames this research is indicated. The context of the research, including that of the participants and of myself as researcher, is also established. I conclude the chapter with the intended purpose of the study and pose the research questions to be addressed.
The origin of the project

I started this research project as a result of a series of professional and personal experiences in higher education. Reflecting on these experiences led me to insights into aspects of learning and teaching, and the dynamics surrounding these related activities. I can pinpoint several intersecting events that seeded the idea of this research in my mind. First, a tearoom discussion with colleagues about higher education and life-long learning happened to coincide with a conversation with my mother who, enrolled in extra-mural study at the age of 60, was frustrated about the particular challenges in obtaining and understanding tutor feedback in her post-graduate coursework. Second, as a consequence of formal professional development in higher education and the requisite course reading involved, I became increasingly mindful of views from the literature emphasising the importance of feedback as an essential part of learning (e.g., Biggs, 1999; Kolb, 1984; Nicol & Macfarlane-Dick, 2006). The reading I was doing also corresponded with my growing awareness of the ‘reflective practitioner’ approach advocated by Schön (1983). With a reflective approach at the forefront of my mind, my mother’s frustration in the background, plus my readings and conversations, a natural consequence for me was a re-evaluation of my learning and teaching practices, especially those regarding feedback.

As a flow-on effect of this re-evaluation and reflection, I realised I could be doing much better regarding feedback for students’ learning. With this in mind, I organised a post-assessment ‘feedback session’ for a cohort of undergraduate...
Year Two Bachelor of Physiotherapy (BPhty) students taking a paper in Functional Human Anatomy. Approximately half of the 110-strong class turned up to this extra-curricular, voluntary activity, which was many more than I anticipated. After all, this session took place after the assessment task had occurred and students already had their marks at this point in the semester. Furthermore, the session was held outside of normal class time, in the early evening of a weekday. The unexpected (for me) attendance of so many students at this event further piqued my curiosity and awareness about feedback, particularly regarding the assumptions I had been making when thinking about students and feedback. It was clear to me that there was a disconnect between what I assumed students were thinking (and thus doing) regarding feedback and what students were actually thinking and doing. Why did so many students attend this post-assessment ‘feedback session’? What were their reasons for attending and what did they hope to achieve? And what about the students who did not attend? Why were they absent from the session?

In an initial attempt to uncover answers to questions like these, I recruited a focus group of ten students from the Year Two BPhty class a few weeks after the session was held. All ten students who participated in the focus group had attended the ‘feedback session’. The purpose of the focus group was to investigate students’ perspectives on selected aspects of the session. I adopted a Nominal Group technique to use with the participants, with a focus on two key questions. In the first key question, I asked participants ‘what did you get out of
attending the assessment feedback session?’. I thought this was a less direct and therefore less intimidating way of asking the students ‘why did you attend?’. As well as hopefully shedding some light on why students came to the feedback session, answers to this question might also provide hints as to why other students chose not to attend the feedback session; perhaps there were factors in there that could be addressed to increase participation in future feedback sessions? For the second key question, I asked participants for their perspective on what could have been done to improve the post-assessment ‘feedback session’, so that potential future sessions could better address the needs of the learners from a more informed, student-centred approach. Full results from these focus group questions are included as Appendix A.

Following on from the student-reported benefit of that initial post-assessment ‘feedback session’ I organised a similar session for the Year Two BPhty student cohort in the subsequent year. This time, however, the session was incorporated into the course timetable so that, instead of being an extracurricular activity, the voluntary session could potentially be attended by all students if they chose. The overt incorporation of this ‘feedback session’ into the timetable was deliberate; first, to signal to the students the importance of reflecting on assessment processes as a form of feedback (Carless, 2006) and second, to establish a move from individual practices of feedback to a more systemic approach (Mutch, 2003; Orrell, 2006). Aspects of this post-assessment ‘feedback session’ mirrored the session from the previous year. However, as a direct result
of the focus group research, the resources that had been used in the assessment (e.g., anatomical models, anatomical projections, skeletal material) were made available. Students attending this session were also given their own exam scripts, to enable them to review their answers. Out of a total of 110, 86 Year Two BPhty students attended this session. This was a substantial increase in attendance on the previous year (82% compared with approximately 50%). Given the large increase in attendance and the fact that my assumptions regarding students’ views of feedback had only been partially addressed by the focus group research, I decided to undertake a deeper investigation into the relationship between students, their thoughts about feedback, and their actions.

Rationale for the research

In my reading of the student learning literature in higher education I became aware of a strong movement, emergent in recent years, towards creating, encouraging, and enabling ‘self-directed’ or ‘self-regulated’ life-long learners (Brown, 2007). The traditional, didactic, transmission-oriented view of learning was being replaced with a view of learning that was more collaborative, that sought to establish learning partnerships, that shifted the emphasis in learning toward a student-centred, and ultimately self-directed, point of view (Biggs, 1999; Higgins, Hartley & Skelton, 2001, 2002; Nesbit & Burton, 2006). As this shift in viewpoint occurred, many elements of the learning process and the learning
context were being identified, emphasised and investigated – either for the first
time or, reflecting an altered viewpoint, re-examined with a different lens.

Feedback has been shown to be one of the most central elements of the
learning process (Black & Wiliam, 1998a; Butler & Winne, 1995; Carless, 2006;
Hattie & Timperley, 2007; Sadler, 1998). With an increasing emphasis towards a
more student-centred view of learning, feedback in the higher education learning
environment was one of those elements receiving increasing attention from
researchers. A variety of methods have been used to collect data from teachers
and learners to address specific issues such as where and who feedback comes
from, factors influencing the effectiveness of feedback, how students
comprehend feedback and how feedback comments are utilised by students. The
research seemed to be dominated by a view of feedback that was atomistic and
utilitarian. It was clear that the underlying idea of what feedback was - the ways in
which students thought about or conceptualised feedback - had not been
substantially addressed in the literature. A definition of feedback would often be
provided or discussed by authors, but no one seemed to be asking the student
participants if they held the same view or, indeed, what their view of feedback
actually was. In this absence of evidence in the literature, I decided to conduct my
study into the student experience of feedback by starting with the question ‘what
is feedback?’. I wanted to focus on feedback as an entity in itself, rather than as
an assumed part of the act of learning. Adopting a view of feedback as a
phenomenon, and looking at the ways in which that phenomenon is experienced
and conceptualised by involved parties (such as students and teachers) is something that behoves research attention, for it is known that a person’s conception of a phenomenon reflects how they perceive, understand and relate to that phenomenon (Marton, 1981, 1986; Samuelowicz & Bain, 2002; Trigwell, Prosser & Taylor, 1994).

According to Marton and Booth (1997), in order to make sense of what a person thinks a phenomenon is, we have to understand the way(s) in which they are capable of experiencing the phenomenon. In other words, a person’s conception of a phenomenon is based in their experience of that phenomenon. This is essentially a non-dualist perspective, a view of human understanding as being the relationship between the person and the phenomenon, as opposed to a dualist view of human understanding that sees the person and the phenomenon as separate entities (Säljö, 1997). Differences in the capabilities for experiencing, and thus conceiving a particular phenomenon - for example, feedback - can reflect educationally critical points of difference (Marton & Booth, 1997). Having an understanding of how students think about feedback will enable stakeholders in the learning process to establish a common ground for engaging in feedback. The question of ‘does the student understand the feedback?’ (Higgins et al., 2001) can be rephrased to a much more fundamental one of ‘how does the student understand feedback?’.
Definition of terms: ‘conception’

The question in the preceding paragraph brings in to focus the central issue of this research project. In order to address the question of how students understand a phenomenon such as feedback, the initial aim is to identify students’ conceptions of the phenomenon (Marton, 1981). The use of the word conception in this study follows Marton and Booth’s definition of the term, whereby a conception is “what this something is for us, what meaning it has for us, how we can experience it” (1997, p. 208, original emphasis). The aim of research into peoples’ conceptions of phenomena is to uncover the variation in ways in which individuals describe and understand the world, as they experience it (Marton, 1991). There is an assumption in all conception-based research of the importance in understanding the “meaning, or range of meanings” (Åkerlind, 2003, p. 375) of a conception, as experienced by others. There is also an assumption as to the importance of describing that meaning (Svensson, 1997).

In order to explore students’ conceptions of the phenomenon of feedback, the research approach of phenomenography forms the basis of a theoretical framework for this study. The aim of phenomenography is to explore the different understandings or conceptions of phenomena in the world around us (Marton, 1981). By taking a second-order perspective, a phenomenographic approach allows a researcher to investigate other peoples’ ways of experiencing a phenomenon (Marton, 1994; Marton & Booth, 1997). The variations in ways of
experiencing a phenomenon give rise to differing conceptions of the phenomenon in question (Entwistle & Walker, 2000). The methodological intent behind phenomenography is described further in Chapter Three.

I use the term ‘conception’ in this study to mean the students’ personal understandings, views, or ideas of ‘feedback’ as the phenomenon of interest (Marton & Pong, 2005). Having a working definition such as this of the term ‘conception’ is important in setting a philosophical framework that will help this study to reveal students’ conceptions of feedback; an understanding of students’ conceptions of feedback and the potential variation amongst those conceptions will form a platform on which to then meaningfully engage in further dialogue surrounding feedback.

Definition of terms: ‘feedback’

Black and Wiliam (1998a) suggest that the origins of the term ‘feedback’ are related to electrical circuitry, whereby “information about the level of an output signal (specifically, the gap between the actual level of the output signal and some defined ‘reference’ level) was fed back into one of the system’s inputs” (p. 47), with the intention of either reducing the gap or increasing the gap (negative or positive feedback, respectively). A definition of the term ‘feedback’ as it applies to human functioning and used by many researchers (e.g., Black & Wiliam, 1998a;
Brown, 2007; Orsmond, Merry & Reiling, 2005; Poulos & Mahony, 2007; Taras, 2003, 2006) describes feedback as “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” (Ramaprasad, 1983, p. 4). In other words, feedback is information that can be used to explain the difference between the current and the desired level of achievement. This view of feedback seems somewhat mechanistic and uni-dimensional, given that it takes no account of the potentially complex social and emotional processes surrounding feedback (Higgins et al., 2001; Mutch, 2003, Värlander, 2008).

Butler and Winne (1995) provide a definition of feedback as “information with which a learner can confirm, add to, overwrite, tune or restructure information in memory” (p. 275). In a review on the effectiveness of feedback, Hattie and Timperley (2007) refer to this definition of feedback yet, at the same time, they are more aware of “the gulfs that can exist between provider and receiver of feedback” (p. 103). Hattie and Timperley (2007) expand on previous conceptualisations of feedback. They include a view of feedback as information that can be provided by a variety of sources for a variety of effects, including information from, and an effect on, the learners themselves (Hattie & Timperley, 2007). This broader conceptualisation of feedback reflects the earlier work of Black and Wiliam (1998a), who also used the term feedback “in its least restrictive sense” (p. 53) to include external and internal sources. However, as the purpose of this study is to identify what students think feedback is, starting off with a
predetermined working definition of the term ‘feedback’ in this introductory chapter would significantly curtail the intent of the research itself.

The research context

This project is set in the Department of Anatomy at the University of Otago, Dunedin. Being the oldest university in New Zealand, Otago has a depth of tradition and history associated with it and is the national centre for tertiary education in the Health Sciences. Whilst the traditions of the university are imbedded in the stone buildings that constitute the campus, innovative approaches to learning and teaching and improving the student experience at Otago are strongly encouraged across the campus and, in this project in particular, in the Department of Anatomy. This large department conducts an active, scientific research-informed teaching programme at all levels of the tertiary spectrum, from undergraduate Health Science First Year (HSFY) teaching to PhD supervision and beyond. In addition to the ‘pure’ anatomical science papers the department also has a large input into the ‘service’ papers, that is the teaching of the anatomical knowledge required by the Health Professional courses at Otago: Medicine, Dentistry, Pharmacy, Physiotherapy and Medical Laboratory Science.

The standard route for entry in to these various Health Professional courses requires the successful completion of the HSFY programme. Students then apply
on a competitive-entry basis to the second year of the professional course of their aspirations. The HSFY cohort is a very large group of students, most of whom have come to university directly from secondary school. Of the approximately 1250 students typically enrolled in the HSFY programme, there are places for only around 600 students in the professional courses. The HSFY programme is competitive, intense and leaves little time for adjustment to life in the tertiary education environment if academic grades are to be achieved and maintained at a sufficiently high level to ensure entry to restricted courses. Although it is not the focus of this project, it should be noted that most of the students in the HSFY programme represent the changing face of secondary education in New Zealand. They have experienced the National Certificate in Educational Achievement (NCEA) as a central tool to measure their educational outcomes and achievements, which is greatly different to the assessment measures used in the tertiary landscape. In other words, most of the students in this study have a similar experiential history of secondary school education and assessment that differs from the system in which they now find themselves. The fact that these students have successfully navigated their way through the HSFY programme and gained entry into a health professional course indicates they are able to operate at a predetermined high level of academic functioning. It also indicates that they have been successful in adapting to the assessment processes that occur at university.
My role in the Department of Anatomy is to teach Human Anatomy, across a variety of different courses. My experience of teaching generally involves students at the undergraduate, rather than post-graduate, level. I have been involved with the HSFY programme for a number of years, in both the laboratory classes as well as lectures. Additionally, as a registered physiotherapist, I have also been well-placed to teach functional human anatomy to Bachelor of Physical Education and Bachelor of Physiotherapy students.

The purpose of the study

The aim of this project is to investigate undergraduate students’ views of feedback as a phenomenon in itself; namely, to identify the range of conceptions of feedback held by students, viewed from a phenomenographic perspective. As with all phenomenographic research, the aim is to investigate variation in the underlying meaning of, or ways of experiencing, a phenomenon; in this case, ‘what’ students think feedback is and ‘how’ students are thinking about feedback. Additionally, data will be sought on students’ responses to feedback, for it is clear to me that students do not all respond to feedback in the same manner. I use the word ‘response’ in this study in a broad way to encompass the range of different ways that students describe their interactions with feedback. I also use the word ‘response’ in this study rather than the word ‘approach’. The latter term, used extensively in previous phenomenographic research, has associations to the
notions of ‘deep’ and ‘surface’ approaches to learning. My preference is to let the data in this study speak for itself, rather than potentially connect it from the very beginning to such well-known constructs. Data from students will be described and analysed with regard to these specific research questions:

- What are undergraduate students’ conceptions of feedback?
- How do undergraduate students respond to feedback?
- What are the influences that affect their responses?
- What is the relationship between undergraduate students’ conceptions of feedback and their responses to feedback?

The structure of this thesis comprises this introductory Chapter, in which the origin and rationale for the project are presented, as well as an explanation of terms and a description of the context in which the research was conducted. In Chapter Two the literature regarding the nature of conceptions is reviewed, and the general landscape of research regarding feedback in higher education is outlined and critiqued. Chapter Three contains a description of both the methodological framework that underpins the project and the method used. In Chapters Four and Five the results of the project are presented. A general discussion of these results is tendered in Chapter Six, and Chapter Seven contains a particular focus on implications for teaching, as well as limitations of the study and suggestions for further research.
It is my hope that this study will add to the understanding of students’ experiences of feedback, something that many investigators claim is an under-researched area of a potentially powerful aspect of learning (Carless, 2006; Higgins et al., 2002; Poulos & Mahony, 2007; Rae & Cochrane, 2008; Weaver, 2006). Further understanding of students’ experiences of feedback may, in turn, enrich students’ learning by better understanding their needs regarding feedback, by engaging learners in more meaningful feedback and by enhancing feedback in support of self-regulation of learning.
Chapter Two
Review of the Literature

Illustration adapted from Gray, 1918, Figure 151
Chapter Outline

In this chapter I explain my rationale for the inclusion and exclusion of research to inform the project. The relevant literature is then reviewed, critiqued and synthesised. The main strands of argument emerging from the literature are interpreted and drawn together, to provide a framework upon which a discussion of the results can be based.
Introduction

As established in Chapter One, the intention of this study is to explore students’ conceptions of the phenomenon of feedback and their responses to feedback. In setting an appropriate context for this study there are several different areas of literature to review. To locate this study in a methodological framework, the first area of literature to review is the experiential literature, with a focus on research that investigates the different ways in which individuals experience and conceptualise various phenomena. The conception-based literature field is reasonably large, so the focus will be specifically on studies that investigate phenomena that are central to learning experiences, such as conceptions of learning, knowledge and understanding. There is also a collection of related literature that looks at the manner in which people approach various phenomena. Much has been written, for example, about students’ experiences of and approaches to learning, so this area of the experiential literature can be useful as an example of illustrating how ideas have developed. Following this, a further area to review is the extensive literature regarding feedback. Some of the feedback literature is theoretical in nature, some describes detailed analysis of written comments on assignments and essays, and there is also a substantial amount of empirical research on feedback. Theoretical perspectives on aspects of feedback will form a basis from which investigative studies into aspects of feedback can be viewed. It is noted that much of the literature regarding feedback is written within the context of assessment, in particular within the
context of formative assessment. Although formative assessment is not the only situation where feedback can occur, it is an important part of the educational landscape in which students can and do experience feedback. Because of this, and the fact that this study had its origins in a post-assessment ‘feedback session’, a general overview of the literature regarding assessment - in particular formative assessment - is also appropriate.

Of particular focus in all of the literature reviewed are those studies that seek to investigate students’ experiences and points of view. Several researchers have investigated staff perspectives, either separate to or in conjunction with the students’ perspectives; these studies are included to illuminate points of difference or similarity as relevant. There is a wealth of literature regarding feedback across the entire education spectrum, from early childhood education to vocation-based adult learning. Thus, in order to maintain a focus on the research questions ‘what are undergraduate students’ conceptions of feedback?’ and ‘how do undergraduate students respond to feedback?’, this study will concentrate where possible on research that is specific to the field of tertiary or higher education. In particular, given the context of the participants in this research, it is the experiences of undergraduate students that will be the main focus of attention.
Observing qualitative differences in phenomena

The roots of this research project can be found in a domain of related studies, where the research focus is on investigating the variation in individuals’ conceptions and experiences of phenomena in the higher education environment. The study by William G. Perry (1970) on forms of intellectual development was perhaps one of the first to identify qualitatively different views held by students on the nature of a given phenomena, in this case knowledge. By way of interviewing undergraduate students in Harvard and Radcliffe colleges over the course of their studies, Perry found a sequence of development in students’ ways of conceptualising knowledge, illustrated by an increased acceptance of uncertainty and relativity in knowledge (Perry, 1970). Although the focus of his work was on the development of students’ views, Perry’s study provided evidence that qualitatively different views of knowledge existed: students’ views ranged from seeing knowledge in terms of true-false (dualistic) information, to accepting a pluralist view of knowledge, through to a relative view of knowledge as being dependent on personal choice of perspective (Perry, 1970).

It was the seminal work of Ference Marton and Roger Säljö and associates, based at the Institute of Education at the University of Göteborg in Sweden in the 1970s, that furthered research into qualitative differences in students’ experiences in the higher education environment. Observations from their professional educational practice suggested that there was considerable variation in what different students came to understand from reading the same piece of
work. In order to investigate this observation, they conducted a study with a group of Swedish university students in which the students were required to read a passage of prose and then answer various questions (Marton & Säljö, 1976a). The questions addressed the meaning of the text the students had read, the way the students had gone about the task of reading, as well as questions intended to determine the kind of understanding of the text (the learning outcome) achieved by the students. On analysis of the research conversations Marton and Säljö noted that, across the group, the students exhibited four different ‘levels’ of learning outcomes. The levels of learning outcomes revealed an increasing understanding of the intention behind the prose content. These levels were seen as qualitatively different ways in which the students comprehended the content of a learning task; the researchers had identified students’ differing conceptions of the content of the learning task. The four conceptions of the content illustrated that the difference was in “what was learned, rather than how much was learned” (Marton & Säljö, 1976a, p. 4, original emphasis).

In addition to determining the differing levels of learning outcomes, Marton and Säljö (1976a) also discovered differences in the way in which students went about the task of reading. Two distinct levels of engagement in the learning process were identified: students adopted either a ‘surface-level’ or a ‘deep-level’ processing approach. In ‘surface-level’ processing, what was learned was factual information about the text itself, usually in an atomistic fashion, with no evidence of an understanding of the overall content. Contrasting this was ‘deep-level’
processing, where what was learned was the meaning of the content, an understanding of what the content was about and how it fitted in to the bigger picture. The processing strategy adopted by students seemed to be related to the learning outcomes achieved, with a ‘deep-level’ processing strategy leading to a fuller understanding or conceptualisation of the meaning of the text (Marton & Säljö, 1976a). In their second, related article (Marton & Säljö, 1976b) the researchers again found a relationship between qualitative differences in learning processes and subsequent learning outcomes. Furthermore, by asking specific and yet different kinds of questions during a reading task, Marton and Säljö (1976b) were able to “induce alternate levels of processing and levels of outcome” (p. 117) in their participant group. They proposed that these qualitative differences in learning process and learning outcome were linked to the conceptions held by the learners on the nature of the learning task itself, where “learning seems to be defined differently depending on, for instance, anticipated task demands” (Marton & Säljö, 1976b, p. 124). Fundamentally, the work of Marton and Säljö seemed to show a relationship between the learner’s conception of learning ‘topic X’ (their conception), the process of learning ‘topic X’ (their approach) and the what of ‘topic X’ that was learned (the outcome).

Research into conceptions of learning took another step forward with Säljö’s (1979a) article on learners’ conceptions of learning. This large project in Sweden involved interviews with 90 people, all of who were taking part in, or about to take part in, some kind of tertiary education. In analysing the interview
data Säljö (1979a) determined “that people seem to have very different conceptions of what learning is about” (p. 22). He found five different conceptions of learning in his study: “learning as the increase of knowledge; learning as memorizing; learning as the acquisition of facts, procedures etc. which can be retained and/or utilised in practice; learning as the abstraction of meaning; learning as an interpretative process aimed at the understanding of reality” (Säljö, 1979a, p. 19). In discussing his findings of these qualitatively different conceptions of learning, Säljö (1979a) suggested there was a strong connection between the differing conceptions detected in his study and the differing surface-level and deep-level processing identified previously in his work with Marton. Säljö (1979a) reiterated the idea of a link between conceptions, processes/approaches and outcomes by suggesting it would be useful to assume that differences in conceptions of learning affect “how people approach a learning task and what they manage to get out of it” (p. 22).

In his continuing work on the nature of conceptions, Marton (1981) proposed the development of a theoretical framework for investigating conceptions. He called this framework ‘phenomenography’ (Marton, 1981). Since the initial work conducted by the Göteborg group, many other researchers have investigated conceptions of various phenomena, creating a genre of conception-based research literature in the field of higher education. Researchers of conceptions typically adopt a phenomenographic approach in their projects and their results tend to demonstrate that, across a given group of individuals,
there will be a limited number of qualitatively different ways of experiencing or conceptualising a phenomenon. One way of grouping the sizeable amount of research on conceptions is to consider the studies according to the phenomenon of interest at the centre of the research project. Grouping the research in this way can be augmented by also considering the research participants’ point of view. Taking this strategy, it can be seen that several researchers have added to Säljö’s (1979a) study on conceptions of learning from the students’ point of view (e.g., Marton & Booth, 1997; Marton, Dall’Alba & Beaty, 1993; Van Rossum & Schenk, 1984) and that conceptions of learning have also been investigated from the teachers’ point of view (e.g., Bruce & Gerber, 1995; Franz & Ferreira, 1996; Shepard, 1991). Students’ conceptions of knowledge, initially observed by Perry (1970), have been further investigated by Dahlgren and Pramling (1985). Qualitative differences in students’ experiences and forms of understanding have also been investigated (e.g., Entwistle & Entwistle, 1991, 1992; Wilhelmsson, Dahlgren, Hult & Josephson, 2011). A substantial body of research exists that investigates teachers’ experiences and conceptions of teaching (e.g., Bond, Knewstubb & Ross, 2006; Dall’Alba, 2005; Entwistle, Skinner, Entwistle, & Orr, 2000; Entwistle & Walker, 2000; McAlpine, Weston, Berthiaume & Fairbank-Roch, 2006; Martin & Balla, 1991; Martin, Prosser, Trigwell, Ramsden & Benjamin, 2000; Murray & Macdonald, 1997; Norton, Richardson, Hartley, Newstead & Mayes, 2005; Pratt, 1992; Samuelowicz & Bain, 1992). Additional to this research are studies that have included students’ conceptions of teaching alongside those of teachers (e.g., Hativa, Barak & Simhi, 2001; Kember & Gow,
Conceptions of **teaching** and their link to conceptions of **learning** have also been investigated, from the teachers’ point of view (e.g., Åkerlind, 2008b; Gow & Kember, 1993; Kember & Kwan, 2000; Prosser, Trigwell & Taylor, 1994; Samuelowicz & Bain, 2001; Trigwell & Prosser, 1996a). Research in the higher education environment on conceptions of **assessment** is less extensive, and has thus far been investigated from the teachers’ point of view (e.g., Samuelowicz & Bain, 2002; Tan, 2008). Conceptions of **feedback**, as a phenomenon, do not appear to have been investigated comprehensively as yet, from either the students’ or teachers’ perspective.

Since Perry’s work in 1970 through to more recent research, a relatively consistent pattern has emerged from the research. The limited number of qualitatively different ways that people experience or conceptualise a phenomenon can be seen as an expanding awareness of the nature of the phenomenon, where earlier conceptions become integrated into broader conceptions, resulting in a more holistic understanding (Entwistle & Peterson, 2004). Marton and Booth (1997) describe the notion of an expanding awareness. For instance, the way an individual experiences or conceptualises a phenomenon reflects that individual’s awareness of particular aspects of the phenomenon. Thus, a different way of experiencing or conceptualising a phenomenon reflects an awareness of more, less or other aspects of the phenomenon. Therefore, a broad conception is one in which there is awareness of more aspects of the phenomenon, compared to a less sophisticated conception. In this way Marton and Booth (1997) describe
awareness as partial, with more and more parts being discerned as the conception increases in complexity. Despite the differences in ways of experiencing a phenomenon, conceptions have been found to be relatively stable within an individual (Entwistle & Peterson, 2004). Development and expansion of conceptions seems to be a slow process, one that is dependent on instances of constructive friction (Vermunt & Verloop, 1999) in which existing ideas and ways of thinking are challenged, new understandings can emerge (Entwistle & Peterson, 2004) and there is greater potential for discerning variation (Marton and Booth, 1997).

Concurrent research on students’ approaches to learning

As mentioned earlier, the research group based in Göteborg have made a substantial contribution to the research that looks at the ways in which students go about or approach their learning. The Göteborg group were not the only researchers in higher education who were paying attention to this area of inquiry. Several review articles on the research into student learning undertaken in the last few decades exist (e.g., Ertl & Wright, 2008; Haggis, 2009; Vermunt & Vermetten, 2004). The purpose here is not to delve extensively into this research but to give a brief overview of other strands of research in this area.
Investigating students’ approaches to learning gained momentum as a research focus in the 1970s, from which point on researchers have used a variety of language to describe their findings. Pask and Scott (1972) used the phrase ‘serialist and holist learning strategies’ to explain students’ approaches to study; this was related to further work by Pask (1976), who amended the terms to ‘operation and comprehension learning’ to represent the preferential learning strategies adopted by students. The notion of ‘deep and surface processing’ put forward by Marton and Säljö (1976a) was interpreted and expanded as ‘holist and atomist approaches’ by Svensson (1977), who was also part of the Swedish-based research group. The ‘reproducing and understanding orientations’ (Biggs, 1978) were reflected in the ‘reproducing and meaning orientations’ outlined in research into student learning done by Entwistle and Ramsden (1983). Marton and Säljö’s (1976a) initial work describing students as adopting ‘deep’ or ‘surface’ level processing was altered slightly in subsequent work to ‘deep’ or ‘surface’ approaches to learning, as it became clear that there was both a process and intention shaping students’ actions (Marton & Säljö, 1984, 1997). An interest in the subject matter and an intention to understand it tends to lead to a deep approach, whilst a surface approach generally involves an intention to cope with course requirements; it is the underlying intention that directs the processes adopted (Entwistle & Peterson, 2004). The notion of deep and surface approaches was added to with the identification of a ‘strategic approach’ (Entwistle & Ramsden, 1983) or ‘achieving approach’ (Biggs, 1987), which reflected an approach to studying (not learning) with an intention to do well in the course, particularly in
assessment (Entwistle & Peterson, 2004). Taking more of a socially embedded view of the ways in which people go about their learning, Meyer (1991) coined the phrase ‘study orchestrations’ to describe the contextualised approaches to study adopted by individuals or groups. Further research into the personal context of learning led Beaty, Gibbs and Morgan (1997) to describe ‘vocational, academic, personal and social’ learning orientations, that include the aims and purposes of study, as well as students’ attitudes and values.

In addition to these qualitative descriptors, several inventories to measure students’ approaches to study and learning have been generated. For example, Entwistle and Ramsden (1983) developed the Approaches to Study Inventory (ASI) to bring together various ideas on approaches to learning, styles of learning, study methods, and motivation. Results from the ASI suggest the existence of four different ‘study orientations’: a ‘meaning’ orientation, a ‘reproducing’ orientation, an ‘achieving’ orientation, and a ‘non-academic’ orientation (Entwistle & Ramsden, 1983). Three different types of learning strategies – deep, surface and achieving – were distinguished by Biggs (1987) in his Study Process Questionnaire (SPQ) and were found to be related to corresponding intrinsic, extrinsic and achievement motivations. These inventories attempt to quantify the ‘how’ of the student approach and include the already mentioned ASI (Entwistle & Ramsden, 1983) and SPQ (Biggs, 1987), as well as the Revised Approaches to Study Inventory: RASI (Tait & Entwistle, 1996) and the Approaches to Study Skills Inventory for Students: ASSIST (Tait, Entwistle & McCune, 1998). The
inventories measure various factors shaping students’ approaches to learning and have shown, in general terms, a relationship between intention, strategy, motivation and learning outcome (McCune & Entwistle, 2000). Such learning inventories have also shown a link between approaches to learning and conceptions of learning (Entwistle & Peterson, 2004).

Conceptions, approaches and context: a relational, intentional view

The identification of differing conceptions and differing levels of processing or approach and a potential relationship between them was an important idea from Marton and Säljö’s initial work (1976a). However, Marton and Säljö (1979b) were clear to point out that such levels of processing or approaches were not individual characteristics of students, but “determined by their [the students’] expectations of what is required of them” (p. 125). The idea of a relationship between conception and approach was further articulated with Säljö (1979b) proposing “the fact that people approach learning in different ways could be understood as a reflection of the variety of beliefs or conceptions which they hold about learning” (p. 444). However, Säljö (1979a) noted the point again, that a person may have a certain conception of learning but this did not necessarily mean they would adopt a particular approach in every learning situation.
Instead, Säljö (1979b) suggested that context was influential, where people with a more developed conception are more aware of the different purposes or contexts of learning, and adopt different learning processes accordingly. He proposed that students attempt to interpret what is required of them in particular learning situations based on their experience of past events – in this way learning is partly defined by social context (Entwistle & Peterson, 2004). Several studies have determined that students’ responses (i.e., the kind of approach used in tackling a particular task) are related to student’s perceptions of the context of learning and the purpose of the task, rather than the intended reality of the situation (Laurillard, 1979; Trigwell & Prosser, 1991). For example, students’ perceptions of heavy workloads and assessment tasks that emphasise rote learning tend to lead to the adoption of a surface approach; a deep approach seems more likely when students perceive clear goals from teaching, along with a sense of independence in learning (Trigwell & Prosser, 1991). The specific processes involved in a ‘deep’ approach in one subject area may not be the same as in another subject area (Entwistle & Ramsden, 1983) but the general features of a ‘deep’ approach remain common (Entwistle, 1997b). Overall, there is recognition that approaches comprise elements of both “individual stability and contextual variability” (McCune & Entwistle, 2000, p. 1). Entwistle (2009) reiterates the idea of relative consistency in approach as being a reflection of individual personality traits. Some students will habitually adopt surface approaches whilst others will seek understanding, but most students “lie between these extremes” (Entwistle, 2009, p. 35). The differences in the adopted approach
- surface or deep - is based upon the intention of the individual; variability in intention, and variability in context, leads to variability in approaches (Entwistle, 2009).

Further research into student learning suggests that approaches adopted by students are relational, in that they are a function of the relationship between the student and the context (Ramsden, 1987; Trigwell & Prosser, 1991). This relationship between students and context is known to be a complex one (Balasooriya, Toohey & Hughes, 2009). Prosser and Trigwell (1999) suggest that an approach can be “defined in terms of the relationship between the student and the particular task with which he/she is engaged” (p. 39). For example, the nature of a course and the teaching within that course form a part of the context, thus students’ perceptions of the course and of the teaching can affect their approach to learning; that is, approach depends on an individual’s reaction to content within a specific context (Prosser & Trigwell, 1999).

Biggs (1989) developed a model to depict relational aspects of learning, where student approaches to learning are seen as situated in a larger educational environment. His model is entitled the 3P-Model of Learning, in which the three ‘Ps’ stand for presage (what exists prior to learning that can affect learning, such as student and teaching context factors), process (the actual learning process as characterised by approaches) and product (the outcome of learning). Biggs’ model portrays learning as a dynamic system, in which approaches to learning are part of a relationship between the student, the context and the task. In their work
on the nature of learning and awareness, Marton and Booth (1997) emphasise that what a person comes to understand or conceptualise reflects a “relationship between the person experiencing and the phenomenon experienced” (p. 108): in other words, an understanding or conception can also be viewed as relational. Additionally, according to Entwistle and Peterson (2004), the ways in which students conceptualise something “will depend on the variety of experience they have had, and how they value and interpret those different experiences” (p. 424).

Looking differently at student learning: the influence of self-regulation

It may be that the emphases in ‘approaches’ research have tended to hide evidence of regulatory strategies that may be present. According to Vermunt and Vermetten, (2004) student learning inventories tend to focus on cognitive processing strategies and aspects of motivation, with little or no link made to metacognitive or regulative aspects of student learning. Metacognitive regulatory aspects are things such as students deciding on learning content, exerting control over the way they process content and steering the course and outcome of their learning (Vermunt & Verloop, 1999). In an attempt to “enrich and broaden earlier conceptualisations of students’ learning styles and strategies in higher education” (1996, p. 26), Vermunt undertook a phenomenographic analysis of a number of interviews with Open University students and with students studying
at a ‘regular’ university. Vermunt was interested in the ways in which factors affecting learning (such as cognitive processes, and metacognitive factors such as mental models of learning and orientations to learning) might come together to produce different ‘learning styles’. He was also interested in how such learning styles were regulated, either internally from within the student, or as a result of external regulation in the form of instructions and direction for study given by teachers. Analysis of the interview data resulted in four main categories of description, which represented four qualitatively different styles of learning, named as follows: ‘undirected’, ‘reproduction directed’, ‘meaning directed’ and ‘application directed’ (Vermunt, 1996). The learning styles differed from each other in a number of ways, including the way in which students regulated their learning, which was seen in an increasing emphasis on the internal regulation of learning. Vermunt (1996) saw the aim of higher education as “to educate people who should be able to think, decide and keep on learning independently” (p. 48). He considered the transfer from external to internal regulation of learning processes was an important part in fulfilling this aim, and concluded that “more research is certainly needed on the interplay between external and internal regulation of learning processes” (Vermunt, 1996, p. 49).

And so he undertook further research. Vermunt’s perspective was based on a constructivist approach to learning theory, in which learning is an “active, constructive and self-directed process” (1998, p. 150) and learning activities are internally regulated and under the control of the learner. Following on from his
earlier phenomenographic analytical study, he developed a diagnostic inventory instrument, the Inventory of Learning Styles (ILS), designed to look at cognitive processing, mental learning models, learning orientations and metacognitive regulation. Vermunt (1998) was particularly interested in students’ regulation of learning. He also developed a model in which he proposed that the way that students process subject matter is most directly determined by the regulation strategies that they employ (Vermunt, 1998). Additionally, according to Vermunt, the way in which students regulate their learning is in itself determined by students’ mental models (conceptions) of, and orientations to, learning. The model proposed by Vermunt (1998) is reproduced as Figure 2.1 below:

Figure 2.1: A model of the regulation of constructive learning processes
(From Vermunt, 1998, p. 153)
Vermunt’s (1998) analysis of the ILS data from 717 students identified the same four learning styles as from his earlier (1996) work. He was critical, however, of the deep/surface descriptions of processing strategies that had been identified by Marton and Säljö back in the 1970s, as his results suggest much more complexity in study behaviour than denoted in the bipolarity of the popular deep/surface ideas. In terms of regulation of studying, Vermunt (1998) determined that regulation from teachers has little influence on students’ processing strategies, and that it is “the learners themselves who regulate their learning processes” (p. 167). As he had previously proposed, Vermunt (1998) found that the main factor in determining study regulation strategies is the discernment of internal control from external control of learning processes. Furthermore, a consistent association is found between the use of learning processes and regulation strategies, and students’ conceptions (or mental models) of learning (Vermunt & Vermetten, 2004).

Drawing strands together

There are several threads to the observations and arguments put forward in the research reviewed thus far: first, it appears that, across a group of individuals, there are a limited number of qualitatively different conceptions of a given phenomenon (Marton et al., 1993; Säljö, 1979a; Trigwell & Prosser, 1991); second, it seems there is a relationship between conceptions and approaches (Marton &
Säljö, 1976a; Säljö, 1979a); third, holding a particular conception does not necessarily equate to an individual adopting an identical approach in every situation, because approaches are not stable and can be influenced by the student’s perception of the learning context (Laurillard, 1979; Marton & Säljö, 1976b). Despite the influence of context, there is a general understanding that the underlying conceptions are relatively stable and development or change requires instances of conceptual dissonance (Entwistle & Peterson, 2004; Vermunt & Verloop, 1999). In contrast, it seems that the approach adopted by an individual for a task will tend to vary and be dependent on the context (McCune & Entwistle, 2000; Prosser & Trigwell, 1999; Trigwell & Prosser, 1991). Furthermore, one of the most significant factors on the potential self-regulation of learning is the differentiation between external and internal control of learning processes and the necessary developmental trend towards the latter (Vermunt, 1998; Vermunt & Vermetten, 2004).

Criticism of the dominance of the idea of deep and surface approaches to learning (e.g., Haggis, 2009; Vermunt, 1998; Webb, 1997) has suggested that this is a restricted way of looking at learning in higher education at a time when “other fields of learning research are engaging in critical self-examination and taking increasing account of the ‘situatedness’ of all forms of social practice” (Haggis, 2003, p. 102). Ashworth and Greasley (2009) argue for research into approaches to learning that has less focus on the aim of, or mental orientation to, learning and more focus on “the meaning for the students of the learning material itself,
including such things as its difficulty or interest” (p. 562). They maintain that the personal meaning of what is to be learned is “hugely important” (Ashworth & Greasley, 2009, p. 565) and “to leave out consideration of this meaning is to neglect that the meaning of the phenomenon lies in its embeddedness within the broad experience of the student” (Ashworth & Greasley, 2009, p. 564). I suggest that the general patterns and trends found in the decades of research into students’ learning can be used to structure this current research into students’ conceptions of feedback. Perhaps the relationship found between conceptions and approaches to learning will be paralleled in this study looking at feedback? Perhaps the ways in which students describe feedback will reveal or be affected by the personal meaning of a situation for them? And, in addition, perhaps looking at feedback from the students’ perspectives will reveal a more ‘situated’ understanding of feedback.

Setting the scene for feedback: a general view of assessment

As stated in the introductory part of this chapter, much of the literature regarding feedback is written within the context of assessment. Therefore an overview of the nature of research into assessment in the higher education environment is relevant at this juncture. Many researchers point to assessment as a powerful tool to influence student learning (e.g., Biggs, 1996; Fowell & Bligh, 2001; Gibbs &
Simpson, 2004; Higgins et al, 2001; Leinster, 2003; MacLellan, 2001; Reynolds & Trehan, 2000; Seale, Chapman & Davey, 2000; Trotter, 2006). So powerful, in fact, that Lowry (1993) claims that assessment is “the single strongest determinant of what students actually learn (as opposed to what they are taught) and is considered to be uniquely powerful as a tool for manipulating the whole education process” (p. 51). For many years researchers have identified and had an awareness of the potential effect of assessment, with Elton and Laurillard (1979) suggesting that “the quickest way to change student learning is to change the assessment system” (p. 100). The effect of a change in assessment on students’ learning was identified by Thomas and Bain (1984), who observed that a change in the assessment context, for example from multiple-choice to essay-type exam questions, was reflected in a tendency towards a deeper approach to studying. In a review of studies investigating students’ views on assessment, Struyven, Dochy and Janssens (2005) conclude that the approach adopted by students is considerably influenced by how students perceive certain assessment contexts. Although the potential effect of assessment on students’ study behaviour can be easily seen (for example as library study spaces are increasingly occupied prior to examination periods) the purposes and uses of assessment are diverse and are not always visible or openly stated; the ability of students to successfully navigate their way through an assessment system is noted as being a significant aspect of the ‘hidden curriculum’ in tertiary education (Sambell & McDowell, 1998).
A focus on formative assessment

When viewed from a traditional framework, there are two main divisions of the purpose of assessment: summative assessment for the purposes of grading and ranking or selecting students (Miller, Imrie & Cox, 1998) and formative assessment which, with feedback at its core, is purported to assist student learning (Sadler, 1998). Researchers have identified an increasing tendency to mix formative ‘feedback’ aspects into summative assessment tasks (Black, Harrison, Lee, Marshall & Wiliam, 2004; Schuwirth & Van der Vleuten, 2004; Taras, 2002). According to Sadler (1998) this needs to be done with care not to affect, in a negative manner, the potential for formative feedback to assist in learning. Yorke (2003) also comments on the simultaneous formative and summative design of assessment. He suggests that the distinction between these two types of assessment is often not clear, something he refers to as “definitional fuzziness” (Yorke, 2003, p. 478). In their editorial on learning-oriented (formative) assessment, Carless, Joughin and Mok (2006) contrast the traditional dualistic view of assessment with one that sees three main purposes of assessment: “assessment as certification, assessment as learning and assessment for fostering lifelong learning” (p. 395). The argument exists that whilst approaches to learning have moved towards more constructivist notions, approaches to assessment have remained focussed – inappropriately – on testing (Shepard, 2000).
A substantial review article by Black and Wiliam (1998a) looked at the effectiveness of formative assessment in classrooms, in particular formative assessment interventions undertaken by school and college teachers. The definition of formative assessment adopted in their study was of “all those activities undertaken by teachers, and/or by their students, which provide information to be used as feedback to modify the teaching and learning activities in which they are engaged” (Black & Wiliam, 1998a, pp. 8-9). They conducted a comprehensive search of the literature on formative assessment published in the decade from 1988-1998, and identified a total of 250 publications as being of sufficient importance to be included in their review. The bulk of the research examined relates to schools, but there is some evidence in the higher education area also. Their review of the research showed “conclusively that formative assessment does improve learning” (Black & Wiliam, 1998a, p. 61) and they expand on this in a related article by stating “there is a body of evidence that formative assessment is an essential component of classroom work” (Black & Wiliam, 1998b, p. 148). In further work, the claim has been made that “few initiatives in education have had such a strong body of evidence to support a claim to raise standards [of learning]” (Black et al, 2004, p. 9).

Published in the same journal issue as Black and Wiliam’s review (1998a) is Sadler’s (1998) work, also on formative assessment. In his theoretical article, Sadler supports the work of his colleagues Black and Wiliam, and advocates for developing an understanding of formative assessment feedback that goes beyond
the technical and structural aspects (Sadler, 1998). He suggests that a crucial issue in the effectiveness of formative assessment is the quality of feedback (Sadler, 1998) and outlines the particular attributes and professional skills that teachers bring to their role in providing such quality feedback. Sadler (1998) notes that “any formative assessment that is not self-assessment involves communication” (p. 79). As such, his concern is with “communication across the divide” (Sadler, 1998, p. 83) of the metacognitive nature of formative assessment skills required to enable students to become more independent in their learning.

Recent research on assessment tends to take a more critical view of the assessment landscape and the place of students within this setting. For example, Boud and Falchikov (2006), writing on assessment and long-term learning, are concerned about conceptions of assessment in which students are seen mainly as recipients rather than active participants in the assessment process. They claim “such conceptions of assessment are inappropriate for long-term learning” (Boud & Falchikov, 2006, p. 402) and instead advocate that students need to learn how to assess for themselves as to what constitutes good work. The authors note the essential role of feedback in this process.

A dominant perspective in assessment

The body of literature on different aspects of assessment in higher education is extensive. For example, several researchers have investigated various theoretical
and technical aspects of assessment (e.g., Angelo, 1993; Black et al, 2004; Brown & Knight, 1994; Lowry, 1993; McKellar, 2002; Miller et al, 1998; Race, 1999; Rolfe & McPherson, 1995; Sadler, 1998; Taras, 2002). Researchers have also investigated issues such as the alignment between theory and practice of assessment (e.g., Bligh, 2001; Boud, 2000), individuals ‘orientations’ to assessment (e.g., Samuelowicz & Bain, 2002), and a view of assessment as a practice of judgement (e.g., Knight, 2006). However, all of these articles have a common perspective that can be critiqued: they consider assessment from the teacher or assessor point of view. Yet there exists a substantial and increasing collection of literature that considers the students’ perspectives on elements of the assessment process, which does seek to understand the effect of assessment on the assessed. Struyven et al. (2005) review this literature on the students’ perspectives, and they emphasise the relationship shown in the literature between students’ perspectives of assessment and students’ approaches to learning. In light of this relationship, they also suggest that uncovering “students’ views may offer us a way forward for improving our educational practice” (Struyven et al., 2005, p. 336).

A general view of feedback

Before reviewing research on students’ views of feedback, it is appropriate to set the scene by looking briefly at the literature that has been written about feedback in general. As with assessment, feedback is seen by researchers as having a major
influence on student learning (e.g., Askew & Lodge, 2000; Biggs, 1999; Carless, 2006; Falchikov, 1995; Price, Handley, Millar & O’Donovan, 2010). Feedback is noted as being “among the most critical influences on student learning” (Hattie & Timperley, 2007, p. 102). Hattie & Timperley (2007) propose that feedback be described in terms of four levels: feedback about a task, feedback aimed at process, feedback on self-regulation aspects and personal feedback such as praise. In contrast to the first three levels of feedback, they claim that feedback which focuses at the personal level is “rarely effective” (Hattie & Timperley, 2007, p. 102) because it contributes little in enhancing learning. In a more recent article, Chetwynd and Dobbyn (2011) propose a taxonomy of feedback as four categories of information: “retrospective-on-content, retrospective-on-skills, future-altering-on-content and future-altering-on-skills” (p. 68). According to Nicol and Macfarlane-Dick (2006), the purpose of feedback mirrors their definition of feedback: that feedback is information to ‘close the gap’ between what is known and what needs to be known. As mentioned in the introductory chapter, this definition of feedback seems mechanistic in its approach and it is interesting that the statements of Nicol and Macfarlane-Dick (2006) arise after the work of Higgins et al. (2001), who portray feedback in a more socially embedded sense as “a complex process of communication” (p. 270). Much of the research on feedback is subject to the same critique as studies on assessment, in that researchers do not seek students’ views and therefore do not directly contribute to an improved understanding of the whole issue. However, there are studies that
do seek the perspective of students in relation to feedback, either as part of students’ perspectives on assessment or specifically on feedback itself.

Seeking students’ views

Several studies seeking students’ perspectives on assessment have included questions about feedback as part of their research agenda. These studies have sought variously to determine the ‘usefulness’ of feedback provided during a course (e.g., Brookhart, 2001; Carless, 2002; Covic & Jones, 2007; Greer, 2001; Hartley & Chesworth, 2000; Trotter, 2006), the importance of feedback in the context of assessment (e.g., Duffield & Spencer, 2002; Lindblom-Ylänne & Lonka, 2001; Winning, Lim & Townsend, 2005) and students’ understandings of the place of feedback in assessment (e.g., Case, 2007; Nesbit & Burton, 2006; Taras, 2001).

Many of these studies used questionnaires as a research tool (e.g., Case, 2007; Covic & Jones, 2007; Duffield & Spencer, 2002; Hartley & Chesworth, 2000; Nesbit & Burton, 2006; Winning et al., 2005), an approach that constrains the language of the students’ perspectives to predetermined questionnaire items. Some researchers (e.g., Brookhart, 2001; Carless, 2002; Greer, 2001; Lindblom-Ylänne & Lonka, 2001; Trotter, 2006) augment their questionnaire findings with focus group semi-structured interviews, but by the time of interview the students’ perspectives may have already been influenced by the questionnaire items, and
therefore framed by the language of someone else’s perspective. It is acknowledged it was not part of the research agenda or purpose of these studies to elicit a definition of the term ‘feedback’. However, the assumptions made by the authors imply a communal understanding or conception of feedback, even though there is no evidence in the literature that such a communal view actually exists.

Many studies that look at students’ views of feedback as an entity in itself seek to obtain a view on various elements of the feedback process. For instance, researchers have looked at the effectiveness of feedback (e.g., Brown, 2007; Ferguson, 2011; Hendry, Bromberger & Armstrong, 2011; Lizzio & Wilson, 2008; Miller, 2009; Poulos & Mahony, 2007; Weaver, 2006), students’ use of feedback (e.g., Boehler et al., 2006; Burke, 2009; Duncan, 2007; Furnborough & Truman, 2009; Higgins et al., 2002; Orsmond et al., 2005; Walker, 2009) and issues relating to the delivery, timing and consistency of feedback (e.g., Brown, 2007; Espasa & Meneses, 2010; Rae & Cochrane, 2008; Scott, Badge & Cann, 2009; Taras, 2003). Hounsell, McCune, Hounsell and Litjens (2008) collated questionnaire data obtained from over 700 hundred students on their experience of feedback, as did Ferguson (2011) with his recent data from 566 students’ responses to a questionnaire on feedback. These large studies essentially reiterate research findings of others about the students’ perspectives. In summary, these findings indicate that not only is there a lack of feedback but there is also a lack of consistency in feedback (Brown, 2007; Hounsell et al., 2008; Taras, 2003); that
feedback needs to be timely and personalised to be ‘useful’ (Ferguson, 2011; Poulos & Mahony, 2007; Weaver, 2006); that many students entering higher education do not possess the skills to be able to act on feedback (Burke, 2009; Weaver, 2006); and, that the ability of students to use feedback effectively is related to their self-efficacy and confidence and also to their capacity to self-regulate their learning (Furnborough & Truman, 2009).

MacLellan (2001) went beyond the student perspective on assessment and sought tutors’ perspectives as well. She found a significant difference between staff and students on the perceived value of feedback. Staff perceived the value of feedback to be much greater than the value perceived by students. Like MacLellan (2001), Carless (2006) also sought staff and students’ perspectives, only to find substantial differences in perceptions between the two groups. For example, he found that tutors believed they were providing detailed, useful feedback and fair marks. In contrast, students thought that feedback was lacking in detail, not useful, and that marking and feedback was inconsistent. Carless (2006) notes these differences as barriers to the potential for learning. Several other researchers have also investigated student and staff perspectives of feedback and found differences between the two (e.g., Adcroft, 2011; Beaumont, O’Doherty & Shannon, 2011; Bevan, Badge, Cann, Willmott & Scott, 2008; Orsmond & Merry, 2011). For example, Adcroft (2011) reports results similar to those of Carless (2006) and MacLellan (2001). When compared to the students’ perspectives, Adcroft (2011) found that staff perceive feedback to be more
important and more powerful in learning. Similarly to Bevan et al. (2008), Beaumont et al. (2011) found that tutors thought students did not make use of feedback. In contrast, students said they “attempted to make use of feedback – if it was meaningful and relevant” (Beaumont et al., 2011, p. 10). Orsmond and Merry (2011) identify a ‘misalignment’ between tutor and student perception and use of feedback. Because of this misalignment, the researchers claim that tutors will never appreciate how their feedback is being used, nor will the full potential of feedback to contribute to students’ learning be realised; they suggest the situation could be enhanced with dialogue (Orsmond & Merry, 2011). Adcroft (2011) argues the differences in perceptions are instead representative of differing ‘mythologies of feedback’, where mythologies are “sets of underlying assumptions and beliefs that determine interpretation and behaviour” (p. 406). In highlighting these different perspectives, studies like these also show the importance of investigating both students’ and staff views. A platform based on mutual understanding will hopefully lead to more meaningful interactions between students, staff, and feedback.

The research methods used in the aforementioned studies involve a variety of methods for collecting data: questionnaire and observation (Boehler et al., 2006; Burke, 2009; Espasa & Meneses, 2010; Ferguson, 2011; Miller, 2009), questionnaire and free text comment (Adcroft, 2011; Lizzio & Wilson, 2008; MacLellan, 2001), questionnaire and focus group discussion or semi-structured interview (Bevan et al., 2008; Carless, 2006; Furnborough & Truman, 2009;
Hendry et al., 2011; Higgins et al., 2002; Hounsell et al., 2008; Scott et al., 2009; Taras, 2003; Walker, 2009; Weaver, 2006) and focus group or semi-structured interview only (Beaumont et al., 2011; Brown, 2007; Duncan, 2007; Orsmond et al., 2005; Orsmond & Merry, 2011; Poulos & Mahony, 2007; Rae & Cochrane, 2008). Of the studies reviewed, many used a research method suited to obtaining and exploring participants’ perspectives: that of actually talking with participants. It is difficult, however, to determine the theoretical approach taken by some researchers when the questionnaire items or interview questions are not included for evaluation by the reader. The literature on feedback can perhaps be regarded in a phenomenographic manner, whereby different categories of literature exist and are built on in a spectrum view amongst researchers. For example, there are those who view feedback under the umbrella of ‘information’ (e.g., Duncan, 2007; Prowse, Duncan, Hughes & Burke, 2007; Wotjas, 1998); those who view feedback as information whilst also acknowledging the impact of affective and cognitive processes such as motivation and restructuring knowledge understandings (e.g., Hattie & Timperley, 2007; Orsmond et al., 2005); and those who view feedback as a social process of communication, with the involvement of factors such as power, discourse and emotion (e.g., Carless, 2006; Higgins et al., 2001; Taras, 2003).

In general, it seems there is an assumption in the literature that the term ‘feedback’ holds the same meaning for researchers as it does for participants. When researchers do provide a definition of feedback for their study, this
The definition of feedback is not checked with participants to determine if they hold the same view. Again, this may be because the purpose of these studies was not to identify a definition of the term, but it does mean that the assumption of a common understanding partly frames the research and needs to be noted. The results and recommendations of these studies into students’ perspectives promote improvements in the pragmatic and structural aspects of feedback; such research does not, however, reveal the underlying ways that students conceptualise feedback, or seek to question current assumptions about a shared understanding of the conception of feedback.

In contrast, Poulos and Mahony (2007) took steps towards overtly questioning an assumed definition of feedback. Set in a Health Science faculty, their study set out to contribute to research on students’ perspectives of feedback by asking questions of students regarding their views on the meaning and significance of feedback, as well as students’ interpretations of the effectiveness of feedback. By actually asking students ‘what is feedback?’ their study is the most closely aligned to this research project in terms of both context (Health Science students) and potential intent (students’ perspectives on what feedback actually is). The method involved was qualitative, as participants were asked questions in a focus-group setting, but details describing the focus groups and the questions asked are not provided. Unfortunately, this makes it difficult to establish the theoretical perspective that informs the research. However, by looking at the way the data are analysed, it is clear that Poulos and Mahoney do
not take a phenomenographic approach to identifying what students think feedback is. They did not explore the structure behind the participants’ ideas of the meaning of feedback. Resultant themes identified in their data are about feedback as ‘meeting criteria’, as being ‘pointers’, as a comment on ‘quality of work’ and as ‘completion’ statements. Poulos and Mahony did not explore these statements further to determine the variations in understanding of ‘what is feedback’, however they did comment that “the range of themes within this dimension demonstrates the differing perceptions that may be held by students in regard to what feedback is” (2007, p. 3). The authors’ purpose was to determine ways of increasing the effectiveness of feedback, not to investigate the meaning that feedback has for students. As such, their focus was on elements like timeliness, significance and source credibility of feedback. This more mechanistic view that dominates much of the research on feedback can be contrasted with a different view of feedback that is developing in the literature.

Reconceptualising feedback

A reconceptualisation of feedback as a process rather than as a product (Beaumont et al., 2011; Price, Handley & Millar, 2011) has emerged in the literature in recent years. Strands of this changing view of feedback can be traced back to researchers who seem to take a more critical view of feedback and assessment (e.g., Boud, 2000; Sadler, 1998); Yorke, 2003). Nicol and Macfarlane-Dick (2006)
argue that “conceptions of assessment have lagged behind conceptions of learning in higher education” (p. 210). The idea of learning as receipt of knowledge (and teaching as transmission of knowledge) has generally moved to a view of learning (and teaching) as interactions where students actively construct their own knowledge and skills (Nicol & Macfarlane-Dick, 2006) and as something that occurs within a particular context (Trigwell & Prosser, 1996a). It seems there is an increasing understanding of the complexity and ‘situatedness’ of the phenomenon of learning (Haggis, 2004). This idea of complexity was explored by Higgins et al. (2001), who focussed on the complexity of feedback. They argue that a better understanding of the potential benefits of feedback cannot be appreciated until feedback is viewed as a process of communication; they propose a starting point of viewing feedback as “an essentially problematic form of communication involving particular social relationships” (Higgins et al., 2001, p. 273, original emphasis). The idea of communication implies the notions of interaction, discussion and dialogue. Continuing this strand of thought, Nicol and Macfarlane-Dick (2006) propose reconceptualising feedback from a monologic to a dialogical process.

Feedback as dialogue

Several researchers further develop the idea of feedback as dialogue. For example, Carless, Salter, Yang and Lam (2010) report that the staff interviewed in
their study talk of a requirement for a “fundamental reconceptualisation of the feedback process” (p. 2), in which the focus in feedback research and practice moves from viewing feedback as a one-way process, to viewing feedback as a two-way dialogical exchange. The idea of dialogue as a part of successful learning and teaching is not a new idea, notes Nicol (2010). He suggests that dissatisfaction with feedback expressed by both students and teachers is symptomatic of the “impoverished dialogue” that exists in current mass higher education (Nicol, 2010, p. 501). He draws upon a ‘conversational framework’ theory of learning and teaching developed by Laurillard (1979, 2002) as a template for determining effective feedback dialogue: that feedback needs to be adaptive, discursive, interactive and reflective (Nicol, 2010).

In their recent study, Bloxham and Campbell (2010) emphasise the idea of dialogue in assessment feedback. They explore the use of ‘interactive cover sheets’ as way of increasing dialogue between students and tutors, without creating a resource-intensive process. Essentially, students were able to use the interactive cover sheet on an assignment to request feedback on specific aspects of their own work that were important to them. The idea was to “shift the balance of responsibility” (Bloxham & Campbell, 2010, p. 292) in assessment feedback so that students would participate more with the feedback process. In reporting results from focus groups, Bloxham and Campbell (2010) indicate that many students found it difficult to engage in a meaningful dialogue with tutors; limitations to dialogue are interpreted by the authors as students not having a full
understanding of staff expectations of standards. Bloxham and Campbell (2010) conclude from their findings “that we need to develop more effective methods for helping students to confidently enter into a dialogue with academic staff” (p. 299).

In encouraging dialogue as an important part of the feedback process, Price et al. (2011) claim that students recognise the need for dialogue. Sadler (2010) is critical of the previous emphasis on feedback as information transmission. He argues that “telling, even detailed telling” (2010, p. 548) is not an appropriate way to communicate thoughts and ideas and construct meaning. Reconceptualising feedback beyond a focus on the input message and meaning construction of that message, Nicol (2010) argues for a view of feedback as a dialogical, two-way process involving “coordinated teacher-student and peer-to-peer interaction, as well as active learner engagement” (p. 503).

Engagement in feedback

An anticipated consequence of a view of feedback that moves from a monologic process to more of a dialogical process (Nicol, 2010) is that students will become more responsible for their learning and more actively engaged in learning. A link between dialogue and engagement is noted by Carless (2006), who suggests that students will become more engaged with feedback and assessment in general if they are able to participate in “assessment dialogues” (p. 230). He describes these assessment dialogues as conversations between teachers and students that are
aimed at generating a shared understanding of different stages in the assessment processes (Carless, 2006). External dialogues, like these conversations, also need to trigger “inner dialogue in students’ minds” (Nicol, 2010, p. 504) – highlighting the idea that engagement in feedback is a dynamic interaction between individuals and their learning environment.

With a focus on improving student learning, Bryson and Hand (2007) sought students’ perceptions of the notion of student engagement. They conducted several focus group discussions with business school students. The results suggested to researchers that the behaviour or approach taken by the teacher is an important factor in enhancing engagement. The relationship with the teacher proved to be critical for students: “enthusiastic and engaged teachers, for many of our focus group students, were a prerequisite for student engagement” (Bryson & Hand, 2007, p. 357). The researchers report the students’ views as a continuum from disengagement to engagement and note that an individual’s engagement in a task can vary, both within a subject and across their whole course of study (Bryson & Hand, 2007). Variation in engagement is partly addressed by McCune’s (2009) investigation into what students perceive as influencing their willingness to engage actively with their studies. Survey comments from students about the perceived value of the subject matter, in terms of future relevance or applicability seem linked to students’ willingness to engage. From this study McCune (2009) proposes that involving students in authentic learning experiences is just one element of what is a multifaceted
concept of student engagement. The ‘multifaceted’ nature of engagement is reiterated by Bovill, Bulley and Morss (2011), who describe student engagement as multidimensional, “encompassing both behavioural and attitudinal aspects” (p. 206).

In another study on engagement, Price et al. (2011) focus on engaging students with assessment feedback. The particular article referred to is part of a much larger project where data via questionnaire (undergraduate students’ perceptions of feedback), case studies (evaluating trials of improving engagement methods) and semi-structured interviews (16 undergraduate students and 20 staff) were gathered, to explore the stages of the engagement process and also to identify factors that promote or prevent engagement. Their representation of students’ experiences and responses to assessment feedback is reproduced as Figure 2.2:

![Figure 2.2: Student experiences and responses to assessment feedback (Reproduced from Price et al., 2011, p. 5)](image-url)
In explaining the diagram, Price et al. (2011) note that “it is possible that engagement may be suspended at any stage” (p. 5). Based on data from students’ interviews, the authors found that many students became progressively disengaged with feedback following repeated unsatisfactory experiences. Price et al. (2011) link this disengagement to comments from students on their expectations of specific, directive feedback. These expectations from students are interpreted by the researchers as students seeing themselves as “receivers of a product, rather than partners in a learning process” (Price et al., 2011, p. 12).

Further research into student engagement in feedback processes is illustrated in a study by Handley and Williams (2011). They sought to enhance students’ engagement with feedback by giving students exemplar assignments annotated with feedback before submission of their final assignments. Via an online facility, students could view exemplars and post comments or questions to tutors and peers on a discussion board. Although there was no quantitative effect such as an increase in assignment marks (when compared to previous cohorts), the questionnaire data showed that the exemplar facility was highly valued by students. Handley and Williams (2011) note with interest that the discussion board facility was not used by students; the reasons for the lack of use were not established by the researchers. However, Handley and Williams (2011) suggest that inviting the students to commit to an online, written interaction was perhaps “a step too far for the students” (p. 103) and that without students’ engagement, such pedagogical interactions are not going to be effective. The researchers note
instead that students preferred to discuss issues with their peers in “the more spontaneous and informal learning space of the classroom” (Handley & Williams, 2011, p. 106).

The role of peer feedback

From the research on students’ engagement with feedback, it seems that moves towards establishing partnerships in learning can perhaps be built around peer-to-peer feedback. There is a view in the literature that “while students have been given more responsibility for learning in recent years, there has been far greater reluctance to give them increased responsibility for assessment processes” (Nicol & Macfarlane-Dick, 2006, p. 215). As noted earlier, it seems that the increasingly constructivist view of learning (Vermunt, 1998) has not been matched with similarly changing views of assessment processes, including that of feedback. Reflecting an emphasis on the role of higher education in developing life-long learners, Boud (2000) proposes the concept of sustainable assessment.

Sustainable assessment is a view of all aspects of assessment, including feedback, as processes that better equip students to undertake activities that accompany learning throughout life (Boud, 2000). It is in this concept that the link can be made to peer feedback. Boud (2000) suggests that dominant views of assessment “too easily locate responsibility for making judgments in the hands of others” (p. 155). This point is reiterated by Nicol and Macfarlane-Dick (2006); that the
control of, and responsibility for, formative assessment and feedback is still largely in the hands of teachers. Boud (2000) argues that learners will need to be able to assess all manner of learning tasks they will inevitably undertake in life: that assessment is “an indispensible accompaniment to life-long learning” (p. 151). In light of this link between assessment and developing life-long learners, Boud (2000) sees it as vital that assessment processes, including feedback, “move from the exclusive domain of assessors into the hands of learners” (p. 151). And it is here that the idea of peer feedback is situated.

Peer feedback differs from peer assessment. Peer assessment is commonly understood as students giving marks or grades to one another (Falchikov, 2001) and much of the research into peer assessment is dominated by studies that seek to measure and establish peer-peer and peer-teacher marking reliability (e.g., Cho, Schunn & Wilson, 2006; Miller, 2003). Liu and Carless (2006) argue that a focus on the reliability of marking in peer assessment has tended to detract from its potential to enhance learning. In response, they propose the term “peer feedback” (Liu & Carless, 2006, p. 280). They describe peer feedback as a process of communication amongst learners, consisting of “rich, detailed comments” (Liu & Carless, 2006, p. 280) with an emphasis on students’ active intellectual engagement with task criteria and standards. This active engagement with peers in order to obtain meaningful understanding of feedback reflects a social constructivist approach to assessment (Rust, O’Donovan & Price, 2005). As students engage in peer feedback processes, they take an active role in managing
their own learning (Liu & Carless, 2006) and thus contribute to the development of skills for self-regulation (Vermunt, 1998). Self-assessment skills, an essential element of life-long learning (Boud, 2000) can be developed through peer feedback processes: an increased involvement in peer feedback provides more opportunities to develop students’ expertise in making judgments (Liu & Carless, 2006).

But what are students’ views of peer feedback? It is difficult to find studies that separate peer feedback from peer assessment processes and on the whole the research reveals a mixed perspective. Several studies have found that students report positive experiences of peer assessment activities. For example, Wen and Tsai (2006) report that students came to respect their peers’ judgment and had a positive view of peer assessment processes. This positive view was enhanced by continued exposure to peer assessment tasks. Gukas, Miles, Heylings and Leinster (2008) also found that students reported largely positive experiences of peer assessment, and that students appreciated the anonymity of the process. Results from a questionnaire on formative peer assessment (Vickerman, 2009) revealed a positive response from students, who considered that formative peer assessment enhanced their learning and development. In contrast, Kaufman and Schunn (2011) found negative perspectives of online peer assessment processes. Cheng and Warren (1997) gauged students’ attitudes towards peer assessment processes both prior to and following a peer assessment exercise. They found an overall positive shift in students’ attitudes to peer assessment, as well their confidence in
undertaking, peer assessment activities. However the authors express concern for the significant minority of students who reported negative experiences (Cheng & Warren, 1997). For all students, and for these students in particular, Cheng and Warren (1997) suggest that “building up a sense of awareness” (p. 239) about assessment processes is important. Orsmond et al. (2000, 2002) emphasise the need for a strong sense of student awareness and use student-derived marking criteria in both peer and self-assessment tasks. Their view of success in such assessment tasks is based on “how much the student develops during all stages of the assessment process” (Orsmond et al., 2000, p. 24, original emphasis); the researchers focus on the assessment process, rather than on the assessment product. Orsmond et al. (2000) report that as a result of the peer and self-assessment tasks, students felt their work became more structured and they were challenged and encouraged to think more.

Certainly there are practical reasons for promoting the use of peer feedback processes, not least that students receive a greater volume of feedback in a faster timeframe (van den Berg, Admiraal & Pilot, 2006). There is also a potential time saving for staff who do not have to ‘produce’ all of the feedback (Nicol, 2010). However the emphasis in this study is on a view of peer feedback that “enhances in students a sense of self-control over learning” (Nicol & Macfarlane-Dick, 2006, p. 210). Nicol (2010) argues that there is potency in giving as well as receiving feedback. By harnessing students as a source (Nicol, 2010) and strengthening peer feedback processes, students can develop capability in complex appraisal.
tasks (Sadler, 2010). It seems that if students are given time and support (Orsmond et al., 2000) and have clarity about the purpose and the process (Smith, Cooper & Lancaster, 2002) then continued exposure to, and experience with, evaluating peers’ work may encourage students to see themselves as well-placed, valuable sources of feedback for such work (Kaufman & Schunn, 2011).

Carless et al. (2010) argue that involving students in the construction of feedback with their peers implies an enhancement of the students’ role in feedback processes. These researchers make a case for an increasing emphasis on feedback practices in which the autonomy and self-monitoring capacities of students are developed and they propose the idea of ‘sustainable feedback’. According to the authors, sustainable feedback is feedback that “supports students in self-monitoring their own work independently of the tutor” (Carless et al., 2010, p. 12). They argue for a view of feedback that is based in students’ self-regulation development (Carless et al., 2010).

A lens of self-regulation

A substantial article by Butler and Winne (1995) draws together various parts of the literature on self-regulated learning. Their focus is on linking ideas about self-regulated learning to research on feedback, in particular how feedback can influence students’ regulation of engagement during learning. As mentioned previously (e.g., Vermunt, 1998; Vermunt & Verloop, 2000) self-regulated learning
involves the student exercising a range of behavioural, affective and cognitive skills as they undertake a learning task. Self-regulation of learning involves, amongst other things, goal setting, generating tactics and strategies for learning, plus monitoring of task progression (Butler & Winne, 1995). These researchers describe self-regulated learning as “a deliberate, judgmental and adaptive process…[where] feedback is an inherent catalyst” (Butler & Winne, 1995, p. 246). By reviewing research on feedback through a lens of self-regulation, they suggest that feedback specifically targeted towards goal setting, application of learning tactics and monitoring skills is the kind of feedback that will best enhance self-regulation of learning (Butler & Winne, 1995). They emphasise, however, that students are not blank slates and will contextualise feedback according to prior knowledge about learning – that beliefs about learning affect students’ self-regulation of learning by influencing the way in which students interpret and engage with feedback (Butler & Winne, 1995).

Another influential article linking feedback and self-regulated learning is the oft-referenced article by Nicol and Macfarlane-Dick (2006) on formative assessment and feedback. Arguing that feedback “should be used to empower students as self-regulated learners” (p. 199), Nicol and Macfarlane-Dick criticise what they see as the ‘transmission’ view of feedback in research: messages about what is right/wrong/strengths/weaknesses of the students’ work are transmitted from the teacher to students, who then attempt to use this information to make improvements. The problem with this transmission view includes assumptions
that students understand feedback information, ignoring motivational effects of feedback, plus a lack of empowerment in students’ development (Nicol & Macfarlane-Dick, 2006). Instead, Nicol and Macfarlane-Dick (2006) review the research on feedback and reinterpret it from a perspective of self-regulated learning, “whereby students are seen as having a proactive rather than a reactive role in generating and using feedback” (p. 199). From this perspective they propose a model of feedback, as well as a number of principles of feedback practice in support of self-regulation of learning. Their model is based on the earlier work by Butler and Winne (1995) and consists of external factors such as task setting by teachers, external feedback and observable task outcomes. However, in their model Nicol and Macfarlane-Dick (2006) emphasise the role of student-generated (internal) feedback as a crucial part of self-regulatory learning processes. An adaptation of the model is included on the following page as Figure 2.3.
Additional to the model are seven principles of feedback practice that Nicol and Macfarlane-Dick (2006) suggest for ‘good quality external feedback’: clarification on what good performance is; development of self-assessment/ reflection; information about students’ own learning; encouragement of dialogue between teacher and between peers; encouragement of positive motivation/self esteem; provision of opportunities to close gaps in achievement; information to
teachers to help shape and improve teaching. In suggesting these principles of good feedback practice Nicol and Macfarlane-Dick (2006) propose that, for students to evolve as capable life-long learners “they must be provided with opportunities to develop the capacity to regulate their own learning as they progress through higher education” (p. 215).

Summary of the literature

From the research reviewed above, it is clear that much is written on the theoretical, structural, cognitive and even affective or motivational aspects of assessment and feedback. There is a distinct thread in the literature that seeks to question the current role of assessment and feedback in contributing towards life-long learning in students. Some of the research into assessment and feedback is formulated from a practical, pragmatic perspective. Other literature takes a more critical perspective, questioning the hegemonic positions of the learner and the learned and their respective ‘sides’ in the assessment environment. Several researchers have investigated beyond the theoretical and have sought participants’ points of view of assessment and feedback, whether that be of students, teachers or both. Fewer researchers have looked specifically at feedback as an entity. Those that do tend to focus on functional elements such as the effectiveness and use of feedback. Research of this nature is useful for many things, not least in promoting an informed approach to best practice in learning and teaching, as well
as contributing to the professional practice of an academic community where feedback is a researched (and researchable) topic. More recent research into feedback seems to be adopting an increasingly holistic and constructivist view of feedback, with a focus on learners as a crucial part of the scene. Themes in this research emphasise connecting feedback with students’ engagement in learning, and with developing students’ skills in self-regulating their learning. However, by not addressing the underlying different ways in which students conceptualise feedback these studies are, in some way, building their findings on a platform that is not completely understood. Before a solid relationship of understanding can be achieved, this gap in the literature on investigating students’ conceptions of feedback needs to be addressed. Bringing feedback into the centre of attention as a phenomenon in itself provides an opportunity to investigate the ways in which students conceptualise feedback. It is important to uncover and explore these conceptions because “until we more fully understand the views and responses of students, education cannot hope to be truly student-centred” (Weaver, 2006, p. 380).
Chapter Three
Methodology and Method

Illustration adapted from Gray, 1918, Figure 212
Chapter Outline

My aim in this chapter is to provide an account of the way the research was conducted. First, the perspectives that inform the research are outlined, including a description of the background influence of my previous experiences in research. The rationale behind the methodology is described, first in general terms and then with specific reference to the research, as required. Following this, the method – how the research was actually undertaken and how the results were obtained and are presented – is detailed.
Methodology

Personal challenges: assumptions, awareness and reflexivity

I come from the world of science. Prior to undertaking this study, all of my research experience has occurred within the world of science. In this world, I was unaware of words such as ‘paradigm’ or ‘epistemology’ or ‘positivism’. The professional application of my science knowledge has been based around the idea of ‘evidence-based practice’. I operated within this world with the ‘scientific method’ as my unquestioned ideology, without an informed awareness of the assumptions I was making about my concept of research and of the world in general. In undertaking this study I have stepped beyond the familiarity of the scientific method. My first step on this journey has required me to develop an awareness of the kinds of assumptions I have been making (Prideaux & Bligh, 2002).

Theoretical assumptions and principles are often developed within specific disciplines, and provide a background rationale to guide the framing of research questions, as well as the processes and methods to use (Grant & Giddings, 2002). As mentioned in Chapter One, this study is set in the Department of Anatomy, one of many departments in the Otago School of Medical Sciences. Being rooted
in the natural sciences, the underlying concepts of the discipline of anatomy form a particular paradigm or perspective,

“a patterned set of assumptions concerning reality (ontology), knowledge of that reality (epistemology) and particular ways of knowing about that reality (methodology). These assumptions and the ways of knowing are untested givens and determine how one engages and comes to understand the world. Each investigator must decide what assumptions are acceptable and appropriate for the topic of interest and then use methods consistent with the selected paradigm” (Miller & Crabtree, 1999, p. 8).

Most of the research in the Department of Anatomy, including my own experience, is undertaken in the well-established thinking of a positivist, scientific framework. The positivist perspective encompasses the traditional, ‘scientific method’ approach to empirical research, with the development and testing of hypotheses, cause-effect experimentation, and quantifiable observations and analyses leading to generalisable conclusions (Grant & Giddings, 2002; Husen, 1994; Miller & Crabtree, 1999). A researcher in the positivist perspective is characterised as having a detached, impartial, objective and often ‘expert’ relationship to the subject of the research (Grant & Giddings, 2002). Grant and Giddings (2002) also argue there is a “hierarchy of values” (p. 14) within the more positivist perspective, where methods that have strong ‘validity’ and ‘reliability’ are sometimes perceived to be superior to other ‘softer’ methods. A stance like this tends to ignore that “the interpretive paradigm has different value systems
concerning what it is important to know and, in particular, what serves as evidence” (Grant & Giddings, 2002, p. 16). These ideas about the scientific approach, including the role of the researcher and what constitutes evidence, were assumptions that were part of my background.

The aims of this study are to investigate students’ conceptions of, and responses to, feedback. With these aims, it was obvious that a positivist perspective was not the most suitable philosophical framework. Adopting a detached, impartial and objective stance as per the more positivist perspective was not going to allow for the kind of humanist interaction required in identifying and exploring participants’ experiences. A different perspective would be required. There were many personal challenges in adopting an alternate philosophical perspective for this research: first, as already mentioned, the research was set in a science department and I was actively stepping away from the positivist ‘scientific method’; second, also already mentioned, these scientific traditions framed my educational and research background; finally, the influence exerted by these positivist roots was quite powerful. Facing these challenges required constant reflexive awareness and consideration on my part, in every aspect of this study.
An alternate, complementary perspective

Educational research, according to Husen (1994), is multi-faceted in nature. Because of this, there cannot be any one prevailing research perspective (Stierer & Antoniou, 2004). Rather, the “the choice or ‘mix’ of paradigm is determined by what kind of knowledge one is searching for” (Husen, 1994, p. 5054). A more positivist approach tends to seek for objective and generalisable facts (Miller & Crabtree, 1999). In contrast, an interpretive perspective is characterised by the desire to understand human experiences and the meanings that people attach to them (Grant & Giddings, 2002).

As such, an interpretive perspective provides a more humanist, interactive, qualitative approach with which to respond to the research questions. According to Miller and Crabtree (1999) “no particular paradigm has a final grasp on truth” (p. 11). Furthermore, “continuities as well as ruptures mark the theoretical boundaries between paradigms” (Grant & Giddings, 2002, p. 24). Therefore, the resultant philosophical framework for this study reflects a synthesis: it is influenced by the disciplinary traditions of my background (Stierer & Antoniou, 2004) and, at the same time, is informed by the adoption of a complementary, interpretive perspective.
The notions of ‘validity’ and ‘reliability’ in an interpretive perspective

Although qualitative and quantitative methods can be used in any perspective, qualitative methods seem to have become equated with an interpretive research approach. When measured against the more positivist notions of ‘validity’ and ‘reliability’, these qualitative methods have sometimes been considered substandard (Grant & Giddings, 2002). Rather than studying an objective reality, most qualitative research attempts to study subjective reality (Åkerlind, 2005a). Despite the obviously interpretive nature of much qualitative research, and the subsequent methodological tensions that arise when positivist notions of ‘validity’ and ‘reliability’ are applied in an interpretive perspective, there seems to be an expectation on qualitative researchers to address these issues (Åkerlind, 2005a; Cope, 2004; Richardson, 1999; Sandberg, 1997). According to Cope (2004), the concepts of ‘validity’ and ‘reliability’ in qualitative research have been subject to a gradual demise over time and, as a result, have lead to a de-emphasis of the researcher’s responsibility in ensuring rigour during the research process. Cope (2004) further argues that unless approaches to ‘validity’ and ‘reliability’ are addressed in qualitative research, “the research can be considered unscientific, invalid and unreliable, not serious and not worth publishing” (p. 5).

It has however been acknowledged that there is a different sense of these terms in qualitative research, as compared to in quantitative research (Cope, 2004; Denzin & Lincoln, 2000). Researchers argue instead that the ontological and
epistemological assumptions of the interpretive research approach should be the platform from which notions such as ‘validity’ and ‘reliability’ are framed and addressed (Åkerlind, 2005a; Cope, 2004; Entwistle, 1997a; Sandberg, 1997). The credibility of qualitative research in general requires a shared understanding of the appropriate and relevant research procedures being used (Thomas, 2006). Thus, specific issues of ‘validity’ and ‘reliability’ as they relate to this study are noted in the various sections below.

**Learning to do interpretive research**

There are many different approaches to research within an interpretive perspective. In the more positivist perspective, methodological differences tend to be technically delineated along the basis of method, including statistical procedure. In contrast, a more theoretical or philosophical differentiation exists between the methodologies in the interpretive perspective (Grant & Giddings, 2002). The methodology on which a study is based needs to reflect the aims of the research, so reiterating the aims for this study is appropriate: to identify and explore students’ conceptions of, and responses to, feedback. Research aims like these require a methodological approach with several qualities. The first requirement is that the approach is based on a second-order point of view, rather than a first-order point of view. A second-order view means an approach that investigates students’ conceptions of feedback, rather than my view (first order) of
students’ conceptions of feedback (Marton & Booth, 1997; Trigwell, 2006). Following on from this, it is important that the approach is one that will elicit the breadth and depth of data in the student’s own words, rather than constrain students’ responses to predetermined criteria such as questionnaires or survey forms (Miller & Crabtree, 1999). The final requirement is that the approach has a non-dualist perspective. This means an approach that views the importance of the relationship between the student and the phenomenon, rather than viewing the student as being separate from the phenomenon (Trigwell, 2006). The importance of this non-dualist perspective relates to an epistemological assumption in phenomenography, in which the meaning of a phenomenon arises within the context of such relationships (Marton & Booth, 1997). In other words, how we gain meaning of phenomena is inseparable from the ways in which we experience the given phenomena.

Selecting an appropriate methodology for studying phenomena

In Chapter One it was established that conceptions of phenomena are based on “what this something is for us, what meaning it has for us, how we can experience it” (Marton & Booth, 1997, p. 208, original emphasis). To maintain the validity of the research aims, an appropriate research approach is one with a focus on
studying experiences of phenomena. This leads to two methodological fields: phenomenology and phenomenography. Similar as these two words are in appearance, debate has surrounded the relationship between these two research approaches for many years. Phenomenology arose at the turn of the 20th century primarily from the work of the German mathematician and philosopher Husserl (1859-1938), and was further developed as existential philosophy by Heidegger later in the century (Kvale, 1996). Husserl emphasised the importance of trying to get to the root of human activity as situated in a broadened perspective, attempting to avoid the fragmented, isolated approach of the positivist experimentalists (Husen, 1994). The aim in phenomenological studies is to obtain participants’ perspectives on their world, to describe the diversity of their experiences, and to explain the essential meanings of participants’ experiences (Kvale, 1996). Not only is the aim of phenomenology to capture a full, rich description of a phenomenon (Marton & Booth, 1997; Trigwell, 2006), it is also to search for and describe the common essence of a phenomenon (Kvale, 1996; Marton, 1981).

In attempting to identify the range of students’ experiences of feedback, this study could have been considered somewhat phenomenological in approach. However, it is an interest in the variation in students’ conceptions and the relationship between students’ conceptions and responses to feedback that move this study from phenomenological to an approach based more in phenomenography. Marton and Booth (1997) illustrate a pragmatic difference
between the two approaches: in a phenomenological approach, a researcher might ask ‘what is the common essence of the students’ experiences of a particular phenomenon?’; in contrast, a phenomenographic approach would be to ask ‘what are the critical aspects of variation in the ways that students experience a particular phenomenon, that enable them to engage with it in more or less effective ways?’ (Marton & Booth, 1997). Trigwell (2006) provides a diagram that illustrates the differences between the two methodologies (see Figure 3.1, following page).
Figure 3.1 Defining phenomenography
(Reproduced from Trigwell, 2006, p. 369)
Phenomenography as a methodological approach

Phenomenography has its origins in the work of Marton and associates at Göteborg University, Sweden in the 1970s (Marton, 1981; Svensson, 1997). It emerged as an empirical method of qualitative research, rather than from a theoretical or philosophical basis (Åkerlind, 2005a), in response to perceived limitations of the quantitative approaches to research in education that were dominant at the time (Sandberg, 1997). Phenomenographic research aims to investigate how people experience, understand and ascribe meaning to phenomena or aspects of the world around them (Marton & Pong, 2005; Reid & Petocz, 2006). The research method involves describing and analysing data obtained from participants, usually on several layers (Dall’Alba, 1994). Entwistle (1997a) notes how, when moving from trying to describe a relatively straightforward concept to a more problematic one, it “immediately demonstrates the somewhat idiosyncratic way in which we each understand abstract ideas” (p. 127). It is the exploration of these conceptions, as ‘structures of awareness’ (Marton & Booth, 1997) that constitute the first element of the phenomenographic research approach.

Constituting the second element of the research approach, another aim in phenomenography is to search for variation in ways of understanding a phenomenon, with the assumption that “variation in ways of understanding, thinking about, conceptualising or experiencing (these terms are used interchangeably in phenomenography) equate to variation in awareness of different
aspects of the phenomenon” (Åkerlind, 2008a, pp. 242-243, original emphasis). The search for variation is a search for critical variation, for those key aspects of variation that distinguish qualitatively different ways of experiencing a phenomenon (Åkerlind, 2008a). Critical variation is said to reflect differences in what is discerned or in focal awareness when experiencing a phenomenon (Marton & Booth, 1997), where “what is critical emerges through consistencies across interviews in what is and what is not noticed about the phenomenon” (Åkerlind, 2008a, p. 243).

The third element to the phenomenographic approach relates to exploring the architecture of relationships. Marton and Booth (1997) elaborate on these relationships as including the internal relationship of the referential and structural elements within a conception, the relationship between critical variations across different conceptions, and the relationship between the participant and the phenomenon as a whole (i.e. a non-dualist perspective). According to phenomenographic analysis, conceptions have a logical structure. The various qualitatively different ways of experiencing or conceptualising a phenomenon are called ‘categories of description’ (Trigwell & Prosser, 1996a). These various ‘categories of description’ consist of two components: what is being focussed on (the ‘referential’ aspect) and how it is being focussed on (the ‘structural’ aspect). Furthermore, these referential and structural aspects are considered to be internally related to each other (Trigwell & Prosser, 1996a). Analysis of the various ‘categories of description’ and their relationship to each other produce a
structured set, referred to as the ‘outcome space’ (Åkerlind, 2005a; Booth, 1997; Marton, 1981; Marton & Booth, 1997). The structure of the resulting outcome space thus reflects the relationships between the categories of description, by revealing the critical aspects of variation (Åkerlind, 2003). In terms of the relationship between participants and the phenomenon as a whole, categories of description are often found to be limited in number and hierarchical, representing a series of increasingly inclusive (and complex) ways of experiencing a phenomenon (Åkerlind, 2003; Booth, 1997; Marton & Booth, 1997; Trigwell, 2006). Thus, in the phenomenographic approach the units of analysis are ways of experiencing something (represented as ‘categories of description’) and the object of research is the relational variation in ways of experiencing something (Marton & Booth, 1997). The core of phenomenographic research

“is that it takes a relational (or non-dualist) qualitative, second-order perspective, that it aims to describe the key aspects of the variation of the collective experience of a phenomenon rather than the richness of individual experiences, and that it yields a limited number of internally related, hierarchical categories of description of the variation” (Trigwell, 2006, pp. 368-369).

In recent years there has been movement in the phenomenographic approach away from research that is essentially descriptive, to research that not only describes variation, but also utilises that variation to develop tools for helping with learning. Pang (2003) refers to descriptive phenomenographic research as
the “first face of variation” (p. 146), where researchers are interested in identifying the different ways of experiencing a phenomenon. He argues that in such research, it is “the researcher who senses this variation” (Pang, 2003, p. 146). Pang (2003) contrasts this with the “second face of variation” (p. 146), in which researchers concentrate more on what it actually means to experience a phenomenon in a certain way and how such different ways of experiencing a phenomenon evolve (Pang, 2003). The focus is on how the aspects of variation of a phenomenon are experienced by the experiencer (Pang, 2003).

Emerging from this movement in the phenomenographic approach is an evolving pedagogical theory of learning called variation theory (Marton, 2007; Marton & Tsui, 2004). This theory is based on the argument that in experiencing variation, one discerns that variation is possible from what one has previously experienced, and that this discernment is necessary for learning to occur (Bowden & Marton, 1998). Fazey and Marton (2002) argue that it is “something about the variation, that is learned” (p. 235). The processes behind variation theory involve bringing learners’ attention to different aspects of the phenomenon, by holding some aspects of the phenomenon invariant, whilst at the same time varying other aspects (Åkerlind, 2008b). The critical aspects of variation in experiencing a phenomenon, identified in the ‘second face of variation’ (Pang, 2003) in phenomenographic research, can be used as a basis for teaching people about that phenomenon.
Collecting data

In accordance with the comment made by Svensson (1997), “conceptions may be expressed in different forms of action but they are most accessible through language” (p. 166). Therefore, the way of collecting data in phenomenographic studies needs to be a method allowing for access to, and exploration of ideas through, language. Use of a questionnaire or survey is not generally appropriate, as these tools tend to constrain responses to predetermined categories, and also lack opportunities for significant exploration of ideas. Similarly, the unilateral nature of researcher observations and journal recordings are not appropriate. Instead, a typical data collection method for phenomenographic studies is the research interview.

The research interview is a common and powerful way to explore meaning and understand a participant’s point of view (DiCicco-Bloom & Crabtree, 2006; Fontana & Frey, 1998). The theoretical conceptual framework behind the research interview method assumes that understandings of meanings and experiences are constructed through the interaction of conversation (Kvale, 1996). This differs to the more positivist perspective that knowledge reflects reality, with only one correct view of the world (Kvale, 1996). In addition to the idea of construction of meanings, the research interview is also considered as socially situated, with the cultural constraints of context influencing the interpersonal transactions that occur (Ashworth & Lucas, 2000; Cohen, Manion & Morrison, 2000). The research interview is a structured conversation with a
specific purpose, in which the interviewer defines elements of the interview according to the research question (Marton & Booth, 1997). Furthermore, the research interview is often not a conversation between equal partners, for it is controlled to a large degree by the interviewer (Kvale, 1996). The imbalance of power between interviewer and interviewee can often be significant; thus Marton and Booth (1997) note that it is crucial to be “sensitive to the potential of the relationship” (p. 131).

The purpose of an interview in phenomenography is to explore participants’ experiences of a particular phenomenon. The interview is generally semi-structured in nature, with a predetermined list of ‘trigger’ questions to guide the interviewer (Trigwell, 2006). Often, unstructured follow-up questions are used to encourage elaboration of a topic, as well as to clarify meanings behind words (Åkerlind, 2003; Reid & Petocz, 2006; Trigwell, 2006). The questions are designed to encourage participants to think in an in-depth manner about how they experience a phenomenon and how they constitute meaning about the phenomenon (Reid & Petocz, 2006). The questions tend to be open-ended, not requiring respondents to select from a range of predetermined answers; rather, the questions are intended to allow the participants to answer according to their own frame of reference (Cohen et al., 2000). As the aim of this project is to identify conceptions of feedback held by students in their own words, it is vital that the research interview provides “opportunities for the interviewees to reveal their current understanding of the phenomenon as fully as possible, without the
interviewer introducing any new aspects not previously mentioned by the interviewee” (Åkerlind, 2003, p. 379). Taking into account that people generally have a limited number of ways of conceptualising phenomena, researchers suggest that 10-15 participant interviews are adequate to capture the range of variations in conceptions (Åkerlind, 2008a; Trigwell, 2000).

Critiquing the research interview

As with any research tool, there are opportunities for critique. As a technique, the direct interaction between interviewer and interviewee during the research interview is a source of both advantages and disadvantages (Cohen et al., 2000). Several disadvantages of the research interview have been identified: it is prone to subjectivity and influence on the part of the interviewer; there is an assumption that ‘talk’ equals ‘data’; the lack of anonymity in interviews can lead to participants giving ‘socially acceptable’ responses rather than ‘honest’ responses; it is time consuming; there are multiple sources of bias including the interviewer, the communication skills of the interviewer and the interviewee, the interview questions, the constructed ‘artificial’ nature of the interview and the often imbalanced relationship between the interviewer and interviewee (Ashworth & Lucas, 2000; Cohen et al., 2000; Denzin & Lincoln, 2000; Fontana & Frey, 1998; Kvale, 1996; Richardson, 1999; Säljö, 1997). Despite these disadvantages, for this study the advantages of the research interview are significant: as a research tool,
an interview has the potential to allow for the necessary interaction required to explore and understand students’ experiences and conceptions of feedback in depth.

The validity of a research tool centres on whether the tool is capable of collecting data appropriate to what the study aims to investigate (Åkerlind, 2005a). With opportunities to explore and discuss ideas with participants within the context of a conversation, I considered that using interviews in this study was an appropriate use of an appropriate tool. Reliability of an interview as a research tool relates to the appropriateness of interviews for collecting consistent research data (Åkerlind, 2005a; Kvale, 1996). When looked at from a collective viewpoint, the data collected in this study are related. This suggests that the research interview is a reliable tool for collecting consistent data for identifying conceptions. Additionally, other phenomenographic research has demonstrated consistency of findings when using interviews as a data collection tool (e.g., Marton et al., 1993; Marton & Säljö, 1976a; Säljö, 1979a).
Analysing data

The data analysis phase of studies with a phenomenographic approach has been called “the black art” (Cope, 2004, p. 14), a comment perhaps pertaining to the paucity of explicit description of the processes involved in analysing data. Cope’s comment perhaps also reflects the stance of researchers in the more positivist perspective, in that the exploratory nature of data analysis in an interpretive perspective represents a distinct shift from a quantitative methodological tradition (Svensson, 1997). Data analysis in phenomenography is not a process of measurement, but of discovery (Marton, 1994); it is discovery of the variation in the ways that people experience a phenomenon. There is generally not a strict ‘recipe’ or set of instructions to follow; instead, there are commonalities and variation in phenomenographic research method practice (Åkerlind, 2005a). The intention of the data analysis is to “aim at as deep an understanding as possible of what has been said, or rather, what has been meant” (Marton, 1994, p. 4428). As noted earlier, a premise of the phenomenographic approach is that ways of experiencing something are representative of “a relationship between the experiencer and the phenomenon being experienced” (Åkerlind, 2005a, p. 322). Also noted earlier, the different ways of experiencing - or categories of description - that constitute the outcome space are assumed to be logically related to one another (Åkerlind, 2005a; Marton & Booth, 1997; Trigwell, 2006).

The material collected in interviews forms a collective pool of meaning (Marton & Booth, 1997) from which researchers search for articulated ways of
experiencing the phenomenon (Marton, 1994). The analysis generally starts “with a search for meaning, or variation in meaning, across interview transcripts” (Åkerlind, 2005a, p. 324). Marton (1994) describes the process as a focus on similarities and differences between the ways in which the phenomenon appears to the participants, and then “literally or metaphorically making excerpts from the interviews and putting them into piles” (p. 4428). Groups of overall meanings are determined from the data (Marton & Pong, 2005), at the same time as maintaining a focus on the transcripts and the emerging categories of description as a set. In other words, there is a focus on the collective experience, rather than on the individual experience (Åkerlind, 2005a). The analysis centres on identifying the structure of each conception, identifying within each conception the elements of the phenomenon that are focused on (Marton & Pong, 2005). Focus is held on one aspect of the phenomenon as the dimensions of variation of this aspect are sought. At the same time, other aspects of the phenomenon are held in suspension (Marton & Booth, 1997). Marton and Booth (1997) propose that this suspension is necessary because we cannot be “simultaneously aware of everything with the same degree of acuity all the time” (p. 134). Due to the unique manner in which a phenomenon can be experienced and the endless differences that would result, Åkerlind (2008a) suggests that a reductive approach to this phase of the data analysis is required and that only “key aspects of variation” (p. 243) are reported. As the categories of description emerge from the data, structural relationships that both “distinguish and relate the different meanings from and to each other” are sought
(Åkerlind, 2008a, p. 378). In this way the categories of description are characterised by the variation in which a certain phenomenon is conceptualised or experienced (Marton, 1994). The process of data analysis is highly iterative, requiring multiple readings and re-readings of the data transcripts and the emerging outcomes. The iterative process continues, until no further refinements can be made; at this point, the categories of description are considered to be stable (Åkerlind, 2008a; Trigwell, 2006).

Data analysis in phenomenography: a critique of the process

In addition to their presence in the data collection phase, issues of validity and reliability are also present in the data analysis phase of phenomenographic studies (Entwistle, 1997a). Åkerlind (2005a) describes validity in the data analysis phase as “the degree to which the research findings actually reflect the phenomenon being studied (p. 330). Determining validity in this way introduces tension into the process: whilst the categories of description emerge from within the data and are thus valid in their origin, these categories of description are constructed by the researcher’s interpretation or experience of the data (Marton & Booth, 1997; Sandberg, 1997). Addressing this tension, Åkerlind (2005a) states that “paramount is the importance of attempting, as far as possible, to maintain an open mind during the analysis, minimizing any predetermined views or too rapid
foreclosure in views about the nature of the categories of description” (p. 323). Furthermore, the categories of description reflect not simply the qualitatively different ways in which the phenomenon is experienced, but rather they also reflect how each of the ways of experiencing are expressed (Marton & Booth, 1997; Richardson, 1999).

Reliability in the analysis phase in phenomenographic research is determined by the appropriateness of methodological procedures for ensuring consistency in interpretation of data (Åkerlind, 2005a). In phenomenography, the “undeniable influence” (Cope, 2004, p. 7) of the researcher’s own conceptions and prior knowledge of the phenomenon impacts on how the data are interpreted. Research reliability can be strengthened by adopting an ‘interpretive awareness’, a conscious attempt to counter the effect of a researcher’s particular subjective perspective (Sandberg, 1997). Åkerlind (2005a) also suggests detailing the steps made in interpretations, as well as presenting illustrative examples.

However, data analysis reliability, referred to by Cope (2004) as “replicability” (p. 9), is another matter. Would another researcher report the same outcome space? (Sandberg, 1997). The interpretive process can never be objective and the data are experienced according to the perspective, experience and conceptions of the researcher. As such, the literature on ‘reliability as replicability’ suggests that the question of ‘would another researcher report the same outcome space?’ is not a reasonable question to ask (Cope, 2004; Sandberg, 1997).
Svensson (1997) comments that “not everything said in an interview or part of an interview is relevant or equally relevant in describing a conception” (p. 169). In this project, with only myself directly involved in the data analysis, deciding what is relevant introduces a large amount of subjectivity. To address this, the notions of reflexivity and interpretive awareness are important, allowing me to acknowledge the situated nature of my perspective (Miller & Crabtree, 1999; Sandber, 1997) and continually reflect on my interpretations. Also important in this phase are robust discussions with supervisors or colleagues. Despite being roundly criticised by quantitative researchers for its subjectivity (Entwistle, 1997a), this does not mean the outcome of such individual research is destined to be ‘incorrect’; merely that it may possibly represent a less-than-complete description of the phenomenon being researched (Åkerlind, 2005a).

Presenting data

Data arising from phenomenographic studies is usually presented in a way that reflects the previously described elements of the approach. Conceptions are reported as categories of description, which show the logical relations between the referential (‘what’) and structural (‘how’) aspects of the conception. These categories of description need “to be presented with sufficient extracts to delimit the meaning of the category fully, and also to show, where appropriate, the contextual relationships which exist” (Entwistle, 1997a, p. 133). The outcome
space is a representation of the various categories of description, and is usually presented in a table to show the relationships between the different conceptions. The overall outcome space table reflects the relational nature of the conceptions to the phenomenon as a whole. In the conventions of phenomenographic research, the different ways of understanding or conceptualising a phenomenon are commonly ordered to reflect an identifiable ‘hierarchical’ structure (Marton, 1994). The ‘hierarchy’ is usually one of increasing complexity in the ways of experiencing a phenomenon (Marton & Booth, 1997); conceptions tend to build on each other in an inclusive manner. As such, conceptions have been described as ranging from narrow and limiting, to broader and inclusive (Reid & Petocz, 2006). Åkerlind (2008a) refers to this inclusivity as “an increasing breadth of awareness of different aspects of the phenomenon being investigated” (p. 243).

As with other qualitative methods, excerpts from research interview transcripts are used in order to ‘ground’ the results in the raw data from which they arise (Thomas, 2006).

### A general commentary on the phenomenographic approach

In concluding the theoretical considerations or methodology behind this project, a general commentary on elements of the phenomenographic approach not already mentioned is appropriate. For instance, with a focus on the **collective** level
of experience, individual voices are generally not attended to in phenomenographic research (Åkerlind, 2005a; Marton & Booth, 1997). Also, with a focus on key aspects of variation in the ways a phenomenon is experienced, ways of experiencing a phenomenon that are common across the whole sample might not be included (Trigwell, 2006). Furthermore, reduction of the data to ‘categories of description’ results in an outcome space that is a partial description of the experience of the phenomenon (Svensson, 1997; Trigwell, 2006). Marton and Booth (1997) referred to this as a stripped description, where “the specific flavours, the scents, and the colours of the worlds of the individuals have been abandoned” (p. 114). Åkerlind (2005a) has observed an increasing debate and critique of phenomenography, and expresses concern that “these debates typically neglect to address the issue of accepted variation in phenomenographic practice” (p. 321-322). She argues that the lack of awareness of this variation, considered a part of phenomenographic practice, and lack of published articles describing the variation in practice, has lead to critiques based on misunderstandings about phenomenography (Åkerlind, 2005a).

The ontological and epistemological assumptions underlying phenomenography contend that knowledge of phenomena is “intentionally constituted through individuals’ experience of the phenomena” (Sandberg, 1997, p. 208). Webb (1997) questions the ability of researchers in phenomenography to report on such knowledge of phenomena in an objective way; he argues instead that researchers tend to report on phenomena “as it is understood by the
researchers and as they reconstruct it through the people they interview” (Webb, 1997, p. 210). It is necessary and important to the aims of this study to acknowledge the ontological and epistemological assumptions made in phenomenography, to be cognisant of the powerful influence of my positivist background on decisions and interpretations made, and to maintain a high level of ‘interpretive awareness’ (Sandberg, 1997) in engaging in this research. For, despite its weaknesses, a study with a phenomenographic approach offers a way of investigating issues that are relevant to learning and teaching (Marton & Booth, 1997). In this regard, adopting a phenomenographic approach is seen as a suitable way of investigating students’ conceptions and experiences of feedback.
Method

Ethical approval

Consent for studies involving the use of human participants was obtained from the University of Otago Ethics Committee. This involved submitting an outline of the research process and intended objectives (see Appendix B), as well as copies of the information sheet and consent form for participants (see Appendix C and Appendix D, respectively). A major feature of the ethical study of human participants involves informed consent, the right of withdrawal and the maintenance of confidentiality. These issues were addressed explicitly in the research project with verbal and written references to, as well as a conscious awareness of, these issues in the recruitment, interview, data analysis and data reporting phases.

Participant context

Participants in the research were recruited from the class of 110 students studying Functional Human Anatomy as part of the Year Two Physiotherapy course at Otago University. The Functional Human Anatomy paper is a compulsory paper towards the Bachelor of Physiotherapy (BPhty) degree. The BPhty course at Otago consists of three professional years (Years 2, 3 and 4). Entry to Year Two
is usually determined by academic performance in the competitive Health Science First Year (HSFY) programme, as described in Chapter One. An alternate route for entry to Year Two exists for post-graduate students in appropriate health-related fields but, in this study, the majority of Year Two BPhty students had entered university direct from secondary school, had completed the HSFY programme at Otago, and were in their second year of tertiary education experience. The HSFY programme and BPhty professional years are prescribed courses, consisting of a number of compulsory papers to ensure that every student has studied the fundamentals of the health-related professions. Thus, almost every student in the Year Two BPhty class (except a small minority) has been exposed to the same tertiary academic environment. Therefore, for the purposes and context of this project, the students are considered to be undergraduate students. At the time of the project I was part of the team involved in teaching the Functional Human Anatomy paper for these students. Teaching and learning sessions for the paper consisted of one 50 minute lecture and two 120 minute labs per week. Assessment tasks were written and included two internal tests, a weekly short summative lab-based test and an end-of-year examination. It should also be noted there were no mechanisms in the paper that allowed structured feedback discussion to occur.
Participant recruitment

Two weeks after the first substantial internal assessment task in the Human Anatomy paper, students were invited to attend a ‘feedback’ review session. The session was held during the regular laboratory time for this paper. The purpose of this session was to enable the students to have access to their test scripts, to go through the test questions, and look at the anatomical models and specimens again. A total of 86 students (~78% of class) attended this review session and examined their scripts. Departmental policy did not allow students to retain or copy their scripts but students were encouraged to make notes based on discussions in this review session. Five weeks after this review session students were asked to complete a short survey (see Appendix E) indicating their presence or absence at the review session, their reasoning for their presence or absence at the review session, and their willingness to participate in an individual interview with the study author. A total of 36 students (~33% of class total) indicated at that stage that they would be willing to participate in an interview. Of the 36 students who volunteered to be interviewed, this included two students who had actually not attended the review session and also two students who achieved less than 50% on the assessment task.
Participant sample

Volunteers were categorised according to the mark they had achieved on the anatomy assessment into one of the following groupings: ‘below 50%’, ‘50-60%’, ‘60-70%’ and ‘above 70%’. Grade achievement was utilised as a categorising factor because of implications in the literature that students’ responses to feedback were dependent on grade (Wotjas, 1998). Participants were then randomly selected within each grade grouping. In the first ten students selected for interview, three students were from the ‘50-60%’ grade range, four students were from the ‘60-70%’ grade range and three students were from the ‘above 70%’ grade. No students from the ‘below 50%’ grade range were included in this initial interview cohort. Students were contacted via their provided e-mail addresses with a request to participate in the study (see Appendix F). A follow-up e-mail was sent to confirm details of the date, time and venue for the interview. An information sheet about the project was included in this follow-up e-mail (see Appendix C, previously). One student (from the ‘50-60%’ grade range) in this initial group did not respond, so an additional e-mail was sent (see Appendix G). After no response to this additional e-mail this participant was removed from the study. Thus, nine students from this first cohort were interviewed.

Another ten students were randomly selected based on grade achieved, similar to the above. The ten comprised three students from the ‘50-60%’ grade range, three students from the ‘60-70%’ grade range and four students from the
‘above 70%’ grade range. Again, no students from the ‘below 50%’ grade range were selected for this round of interviews. Two students (both from the ‘50-60%’ grade range) replied indicating they were no longer interested in participating in the study. A further two students (one each from the ‘50-60%’ and ‘60-70%’ grade range) were removed from the study following the non-response e-mail sequence as outlined above. Thus, six students from this second group were interviewed: two from the ‘60-70%’ grade range and four from the ‘above 70%’ grade range.

The remaining 16 students who had volunteered for interview were contacted. This final group consisted of one student from the ‘50-60%’ grade range, four students from the ‘60-70%’ grade range and nine students from the ‘above 70%’ grade range. This group also included two students from the ‘below 50%’ grade range. One student (from the ‘60-70%’ grade range) replied declining to be involved in the study, and a further two students (one each from the ‘50-60%’ and ‘above 70%’ grade range) were removed from the study following the non-response e-mail sequence as outlined earlier. Thus, 13 students from this final group were interviewed: two from the ‘below 50%’ grade range, three from the ‘60-70%’ grade range and eight from the ‘above 70%’ grade range.

In summary, 28 interviews were conducted over a five-week period. The participant sample consisted of: two students from the ‘below 50%’ grade range, two students from the ‘50-60%’ grade range, nine students from the ‘60-70%’ grade range and 15 students from the ‘above 70%’ grade range. The average
grade for the sample group was 68%. Of the group, 22 were female and six were male; 27 participants had attended the review session whilst one participant had not; and 22 participants had come direct from the HSFY programme while six participants had some previous tertiary study experience. Of these six, their previous tertiary experience was varied; four students’ experiences ranged from three months to up to one year, and the other two students had completed undergraduate degrees in other, unrelated fields. Characteristics of the sample, and their comparison to the whole class, are included in Table 3.1 (overleaf).
Table 3.1 Comparison of characteristics of the interview sample vs. the whole class

<table>
<thead>
<tr>
<th></th>
<th>Interview sample (n = 28)</th>
<th>Whole class (n = 110)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Females</strong></td>
<td>78% (n = 22)</td>
<td>72% (n = 80)</td>
</tr>
<tr>
<td><strong>Males</strong></td>
<td>22% (n = 6)</td>
<td>28% (n = 30)</td>
</tr>
<tr>
<td><strong>Straight from HSFY - yes</strong></td>
<td>78% (n = 22)</td>
<td>89% (n = 98)</td>
</tr>
<tr>
<td><strong>Straight from HSFY - no</strong></td>
<td>22% (n = 6)</td>
<td>11% (n = 12)</td>
</tr>
<tr>
<td><strong>Attended review - yes</strong></td>
<td>96% (n = 27)</td>
<td>78% (n = 86)</td>
</tr>
<tr>
<td><strong>Attended review - no</strong></td>
<td>4% (n = 1)</td>
<td>22% (n = 24)</td>
</tr>
<tr>
<td><strong>Average mark in Test 1</strong></td>
<td>68%</td>
<td>65%</td>
</tr>
<tr>
<td><strong>Mark below 50%</strong></td>
<td>7% (n = 2)</td>
<td>7% (n = 7)</td>
</tr>
<tr>
<td><strong>Mark between 50-60%</strong></td>
<td>7% (n = 2)</td>
<td>22% (n = 24)</td>
</tr>
<tr>
<td><strong>Mark between 60-70%</strong></td>
<td>32% (n = 9)</td>
<td>37% (n = 41)</td>
</tr>
<tr>
<td><strong>Mark above 70%</strong></td>
<td>54% (n = 15)</td>
<td>35% (n = 38)</td>
</tr>
</tbody>
</table>

The data in Table 3.1 show that the sample group was similar in most aspects to the whole class. One notable difference between the study sample and the whole class was that almost all of the study participants had attended the post-assessment review session.
Development of interview questions, and data collection

The data collection method involved semi-structured, open-ended, in-depth interviews, conducted with individual participants in a one-on-one situation. Interview questions were initially developed in collaboration with research supervisors. The aim with the questions was to encourage informal, natural conversation with participants (Entwistle, 2009) in order to explore their conceptions of, and responses to, feedback. A pilot interview was conducted with a Year Three BPhty student, who had been a participant in the focus group cohort in the previous year. This student consented to the interview being recorded, which provided an opportunity not only to practice phrasing the interview questions, but also to become familiar with the recording device. Subsequent to the pilot interview, the interview questions were refined as a result of feedback from the student participant and from my review and reflection on the recording. The recording also indicated the need for me to reduce the amount of conversation I was contributing, to allow for more comment from the participant.

Interviews were all held at the beginning of the second semester of Year Two and were conducted in an informal setting in a colleague’s office within the Department of Anatomy. Informed consent was obtained at the time of interview, prior to the commencement of recording. The interviews were held
variably from 7 days to 30 days after the follow-up email and information sheet had been sent. Interview questions have been included as Appendix H.

In order to create a context for participants to discuss feedback, students were first asked to recall a situation in their tertiary education experience where they felt they had experienced feedback. This situation was discussed and further questions were asked to elicit the ‘what’ and ‘how’ of the phenomenon of feedback, as experienced by participants (i.e., from a second-order perspective). Prompts and probe phrases were used to elaborate ideas and clarify meaning where required.

Interviews were recorded using a digital voice recorder, and ranged from 23 minutes to 59 minutes in duration. Of the 28 interviews, 27 were fully recorded and able to be used. The recording that lasted 23 minutes was an interview where issues with the recording device were experienced. The first part of the interview was successfully recorded however, following an interruption (the telephone ringing), the remaining part of the interview was not. Because the recording was incomplete, this interview was excluded from analysis and the data was not used. The one participant whose incomplete interview data was discarded was 20 years old, she had entered the BPhty course directly from HSFY, and her grade in the test had been ‘above 70%’.

After each interview I replayed the recording in order to make notes on what the participants were emphasising in their interview, as well as to check for
clarity of sound capture. The DSS-format electronic voice files were downloaded from the recording device to a password-protected folder on the departmental computer server, accessible only to myself. The electronic voice files were then sent to a document processing service for confidential transcription. Each electronic voice file was transcribed verbatim and the resultant word file was stored in the same password-protected folder on the department server as above.

Checking data

There were two main aspects involved in checking the data: first during the interview process, and again following interview transcription. Using Kvale’s (1996) guidelines for ensuring validity of information as it is being collected, I repeated the participant’s words and phrases back to them at several stages during the interview. This was done explicitly to check with participants that the words and phrases they were using were being accurately captured, and also to avoid paraphrasing participants and thus potentially altering the intended meaning of their perspectives. Following transcription of the electronic voice files, I methodically and systematically checked each recorded interview against its transcribed word file counterpart, for accuracy of transcription. As noted by Kvale (1996) “the transcripts [of the interviews] are artificial constructions from an oral to a written mode of communication. Every transcription from one context to another involves a series of judgements and decisions” (p. 163). Using
such judgement, I punctuated the transcribed word files to illustrate the tonal inflections and patterns of speech. The notes that I had made after each interview were also used to clarify meaning, thus creating a transcription that would be a useful tool for research purposes (Kvale, 1996).

Transcript analysis: generating categories of description

The transcripts were analysed in the iterative analytical manner typical in phenomenographic research (Åkerlind, 2008a). The analysis comprised several phases. The methodology behind the process of transcript analysis was described earlier in this chapter, along with a scaffolded outline of how other researchers have undertaken the highly time-consuming task of analysis. In the first phase of the analysis process, ten transcripts were selected at random from the overall total. Each of these transcripts was read, and initial identification of the participants’ experiences and thoughts regarding feedback were noted. Various and multiple phrases in the transcript were highlighted if they contained elements of the participant’s meaning and experience of feedback. These phrases were examined first in the context of the transcript, and then an overall ‘impression’ (the referential aspect) was noted. I discussed my interpretations and constructions of initial impressions with a research supervisor, and the next ten transcripts were then selected at random. The process outlined above, of noting the initial
identification of experiences and thoughts regarding feedback, was repeated for these next transcripts. The final seven full transcripts were also analysed in this initial manner.

Once this initial broad ‘sweep’ through the transcripts had been made, the process of reading the transcripts began again. In this second phase of analysis, my focus was on phrases that I had highlighted during the first reading of the transcripts. These phrases were used to determine loose groupings of participants’ meanings about feedback across the transcripts. These ‘meaning groupings’ were noted and compared to the initial ‘impression’ notes made from the first reading. The range of meanings reduced from the first to the second reading of the transcripts, as a closer analysis of data revealed some of my initial impressions to be subsets of larger ‘meaning groups’.

After this, I undertook a third reading of the transcripts and their ‘meaning groupings’. By looking closer within the meaning or referential groupings, differences in structural aspects began to delimit from the data. These structural aspects of participants’ experiences, the ‘how’ of their conceptions of feedback, were noted alongside the previously identified referential (‘what’) aspects. I analysed the various structural aspects within each ‘meaning grouping’ for similarities and differences. At this stage the boundaries of the various experiences, as per Marton & Booth’s (1997) ‘structures of awareness’, were delineated. From this process of analysis the categories of description of the qualitatively different ways of experiencing feedback began to take shape.
A meta-analytical view of the category descriptions revealed patterns of emphasis of various elements, which suggested criteria for dimensions of variation. These criteria were applied across the data, to see how they stood in relation to the data. Several further refinements of structural variation, requiring reading and re-reading of the transcripts, was undertaken. After multiple repetitions of this iterative process the dimensions in variation throughout the data seemed to stabilise and no further variation was determined. Frequent ‘validity’ checks were made during and following the analysis phases with research supervisors, along with a constant reflexive, conscious awareness on my part.

Reporting data

All participants were given a pseudonym; these pseudonyms were used so that reporting of data would read in a more humanistic fashion (for example, “Sarah commented…” rather than “Student 3a commented…”). The pseudonyms were chosen so that they bore no relation to the actual participants, nor to other students in their class. In detailing the categories of description, each category needed to be illustrated with excerpts from the transcripts that would portray the meaning of the category fully (Entwistle, 1997a). In each instance, quotations were used to illustrate the meaning of the idea, rather than to categorise the individual respondent (Reid & Petocz, 2006). Although phenomenographic results emphasise the collective view rather than the individual view, the data were
of sufficient depth to be able to utilise participants’ views of feedback as case studies. These case studies are used to highlight the ways in which the characteristics of the category manifested in a particular student’s data.

Data presentation

The data are presented in the two results chapters that follow. Chapter Four contains the first ‘layer’ of analysis, consisting of a report of the categories of description and the construction of the outcome space. Each of the categories has been presented in a similar manner: first, the referential and structural aspects of the category are reported, with supporting descriptive excerpts from participants’ transcripts. A diagrammatic representation of the internal relationship of these aspects is then followed by an illustrative case study. In Chapter Five, the dimensional attributes of the categories – the second layer of analysis – are reported. This broader view across the categories reveals the relationship between the categories, seen in the way the dimensional attributes develop and change, suggesting themes of expanding awareness (Åkerlind, 2005b). Also reported in Chapter Five are data on participants’ responses to feedback, and the relationship of these responses to the categories of description.
Sources of bias

In addition to the issues of validity and reliability already identified in the chapter, other sources of bias that could affect the study were identified throughout the project. There were several sources of bias related to the participant context: the voluntary nature of the recruitment process and the influence this may have had on the resultant ‘type’ of participants who would be interested in taking part in the study; almost all of the interview participants (27 out of the 28) had attended the post-assessment review session, a much greater attendance rate than that of the whole class; plus, the educational background of the study participants was mixed, with two having obtained degrees and others having gone straight from secondary school to HSFY and from there to Year Two BPhty. Also, although the average mark of the interview group and the whole class were similar (68% versus 65%), the representative percentages amongst the grade ranges were different, with the interview sample having a lesser representation from the ‘50-60%’ and ‘60-70%’ grade range, and a greater representation in the ‘above 70%’ grade range, as compared to the whole class. Additionally, of the potential initial 36 interview participants, the greatest number of those who either actively withdrew from the study or were withdrawn due to lack of reply were from the ‘50-60%’ grade range. There was also the potential that the participants may have talked amongst themselves prior to interviews, and thus students’ remarks may have been more considered or premeditated, and perhaps less spontaneous as a result.
There were also sources of bias related to the design and conduct of the study. One issue was that participants were not able to check their own transcripts because the academic year had finished, and they were therefore not able to verify that their transcript was an accurate reflection of their interview experience. Also, bias in the development of the interview questions was a potentially unavoidable element in interpretive research, with my perspective as the researcher influencing the theoretical basis of the study (Svensson, 1997). Sources of bias in the collecting of the data, accuracy checking and analysis of transcripts have been identified in the ‘validity’ and ‘reliability’ sections earlier in the chapter, as have issues relating to the methodological approach itself.

Other identified areas of bias related to the situated nature of the research: as noted earlier, at the time that I was interviewing these students for my own post-graduate research, I was also one of their lecturers. This may have affected the social context of the interview, and perhaps altered participants’ views of what they thought appropriate to say. Also mentioned at the start of this chapter, it was important to identify my background perspective and subsequent ontological and epistemological assumptions as a potential source of bias. Of particular note was the influence of my predominantly positivist experience of research. Acknowledging the many potential sources of bias in this study and being cognisant of them whilst undertaking this project was an essential part of maintaining an ‘interpretive awareness’ (Sandberg, 1997) on my part.
Chapter Four

The Meaning of Feedback

Illustration adapted from Gray, 1918, Figure 498
Chapter Outline

My intention in this chapter is to present a rich and full account of the study data in order to respond to the first research question ‘what are undergraduate students’ conceptions of feedback?’. The chapter consists of four parts, in which each of the different categories of description and their distinctive features are detailed. Each category is introduced by way of a brief outline and a table of features. Following this, the referential and structural aspects of the category are detailed and a diagrammatic interpretation of the structure of the category is depicted. The final element in the category descriptions consists of a mini-case, where a student’s experiences are portrayed in order to give a more personalised, humanistic illustration of the way the category is manifest.
Overview of the outcome space

The focus of the interviews was to look at the different ways that students experienced the phenomenon of feedback. Across the whole participant group was the predominantly tacit idea that the term ‘feedback’ could be considered synonymous with the term ‘information’. This superordinate notion is reported and discussed in Chapter Five. Occasionally, the idea of ‘feedback as information’ was explicitly articulated during the interview; more frequently however, the idea was implied rather than overtly stated. Hence ‘feedback as information’ was mostly taken-for-granted by participants as a general, shared understanding, and this formed the basis of the conceptions. From this starting point, three broad qualitatively different conceptions of feedback were initially identified. These categories of description were designated as A: Feedback as ‘telling’, B: Feedback as ‘guiding’ and C: Feedback as ‘developing understanding’. The referential and structural features of each category of description were determined as being the features that qualitatively differentiated one category from another and, as such, formed the outcome space of the study.

The categories of description related to each other in an inclusive manner, i.e., they built on each other such that C: Feedback as ‘developing understanding’ included that which had previously been iterated in A and B and then extended into a dimension of description not previously emphasised and/or not previously mentioned. The relationship between the elements of the three categories changed as each was discerned and, as a result of this iterative process, a fourth
category was identified. This fourth category of description of feedback contained various elements of the earlier three categories, was expressed mainly by one participant only, and was designated as \textit{D: Feedback as 'opening up a different perspective'}. The four categories of description are the outcome space for the study and are presented in Table 4.1:

\begin{table}[h]
\centering
\begin{tabular}{|c|c|c|c|}
\hline
\textbf{Category} & \textbf{A} & \textbf{B} & \textbf{C} \\
\hline
\textit{The meaning of feedback} & Feedback as telling & Feedback as guiding & Feedback as developing understanding \\
\hline
\textbf{D} & Feedback as opening up a different perspective & \\
\hline
\end{tabular}
\caption{The four categories of description: the outcome space}
\end{table}

The relation of the participants to the outcome space

In phenomenography, participants often express what appear to be more than one view, or fragments of other views (Marton & Booth, 1997). Because of this, in the reporting of the categories, some names appeared in relation to more than a single category. However, no participant expressed ideas that featured in more than two categories. The distribution of participants across the categories is shown in Table 4.2 (overleaf).
Table 4.2 Study pseudonyms and relations to the categories of description

<table>
<thead>
<tr>
<th>Pseudonym</th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
</tr>
</thead>
<tbody>
<tr>
<td>Charlotte</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Kathryn</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Kirsty</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Jason</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Nina</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Emma</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Neve</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tracy</td>
<td>X</td>
<td></td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Britt</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Nadia</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Belinda</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Celia</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bekah</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fiona</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Derek</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Maya</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>David</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dona</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Brenda</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tim</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Deborah</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Nette</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lisa</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ewan</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tessa</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Michelle</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Karl</td>
<td></td>
<td></td>
<td></td>
<td>X</td>
</tr>
</tbody>
</table>
Part One: Category A: Feedback as ‘telling’

Introduction

In this category, students conceptualised feedback as information that was told to them. The information was generally factual in type, such as answers or instructions, and was transmitted from one individual (usually a perceived ‘expert’ - the teacher) to another (usually a perceived ‘novice’ - the student). The conveying of information was linear and unidirectional in nature. The broad meaning or referential aspect (the ‘what’) in this category was that feedback was ‘information’; the structural aspect (the ‘how’) was that information was ‘told’ to the recipient. A summary of this category is outlined in Table 4.3 (overleaf). The referential and structural aspects are expanded in the pages following the table, in order to provide a detailed picture of the students’ ideas and perspectives that contributed to this category.
### Table 4.3: Summary of A: Feedback as telling

<table>
<thead>
<tr>
<th>Question</th>
<th>A: Feedback as telling</th>
</tr>
</thead>
<tbody>
<tr>
<td>What is information?</td>
<td>Fixed, solid, and interpreted in one ‘correct’ way</td>
</tr>
<tr>
<td>What content is the student focused on?</td>
<td>Factual information on marks, ‘correct’ answer, ‘correct’ way of doing something</td>
</tr>
<tr>
<td>Where does feedback come from?</td>
<td>External agents only, emphasis is on ‘expert’ source; peer input has little impact as not ‘experts’</td>
</tr>
<tr>
<td>What is the direction of feedback?</td>
<td>Unidirectional; transmit</td>
</tr>
<tr>
<td>What is the view of time?</td>
<td>Present emphasis, for immediate situation</td>
</tr>
<tr>
<td>In which situations can feedback be applied?</td>
<td>Immediate relevance to in-class academic world</td>
</tr>
</tbody>
</table>
Referential aspects

Diversity in the content of feedback information

As stated above, feedback was conceptualised by students as ‘information’. The told information was about many different elements, hence there was evidence of diversity in information content. For example, information that was told consisted of directive information such as “marks” (Charlotte), “what we need to know in exams” (Jason) and being “corrected” (Kirsty). Additionally, there was information in the form of “the answers” (Tracy) as well as clarification about answers, for example “going over the answers and then expanding on the answers” (Kathryn). What was told was also a commentary on accomplishment, for example “what people say about your performance in something” (Emma) or that “someone else is giving you their opinion on either your performance or your ability to do something or understand something” (Nina).

In addition to the diversity of information content, there was also evidence of diversity in the number of different elements of content held in focus by students. For example, Jason was particularly focussed on one activity - passing exams - and for him feedback was being told information about “the amount of knowledge that you have to know about the exam”. Other participants focussed on more than one content element, including information about ‘how they were doing’ in their learning, wanting to be told “what I got wrong” (Kathryn), “what I am supposed to be doing right” (Charlotte) and whether “what I write is
acceptable” (Emma). Feedback information about “how you could improve” (Neve) was occasionally noted, such as “they [the tutor] will go round and say ‘you are doing it well but to do it better you could do it like this’” (Nina). Attending to information about multiple, different, content elements was interpreted as students shifting their focus, giving a differing emphasis on information content as required.

**Different types of feedback**

Told information as feedback was distinguished in this category based on the situation and on the kind of information being told. Situational feedback was discerned by students in terms of a ‘learning situation’ or an ‘assessment situation’, for example:

“We’ve got our labs in first semester for our practical papers and obviously if you’re doing a technique or something they will give you feedback then at the time, but it is not marked, it’s not assessment feedback, it is just feedback in general…I think that’s really good, and in that setting, because it is good to know at that time instead of later on, in say, an assessment and get feedback, it is good to know so you can improve when you need to…the way I see it, I mean, I think it’s way easier for them to give feedback in
the labs when they are not assessing you, as opposed to when they
are, in tests and in practicals” (Tracy, her emphases)

The kind of feedback was separated into getting feedback for practical subjects compared to getting feedback in the more theoretical subjects:

“The subjects, the more practical subjects, definitely go further and get confirmation…because there’s so many different ways of doing the practical things, that you sort of want to make sure that you are doing it right and there’s not a better way you could be doing it. Um… with the harder subjects, the more solid base ones like physiology…the theoretical ones, um, I probably don’t actually go to the lecturer or whoever. I don’t know why. I probably ask peers or refer to textbooks…when it’s practical it’s a little different I feel…with practical it is more important I think” (Nina).

Despite these distinctions in what was told in each different situation, the category meaning remained constant. That is to say, although the content that was focussed on changed according to the situation, the meaning of the conception - feedback as ‘information that is told’ - did not.
Structural aspects

Introduction

The structural aspect (the ‘how’) of this category was dominated by the act of ‘telling’. Information, in whatever focus held by the student at the time, was told to students. The mode of communication was transmission; the resultant unidirectional monologue from one party to another was a distinguishing characteristic of the category. As well as the act of ‘telling’, there was also the consequential act from transmission – the act of ‘being told’. There was no mention made of discussion or consideration of information that was told - the content of feedback was not something to be thought about, modified or adapted.

Who does the telling: students’ reliance on the ‘expert’

A variety of sources of feedback were identified in this category and all of them were external to the students themselves. Most consistently, information that was told came from a perceived ‘expert’, frequently “the lecturer or the demonstrator” (Jason), “the lab tutor” (Kathryn), “someone that’s taking you for the course” (Kirsty) and the “people who set the paper, so, the course coordinators or whoever is setting out the curriculum of what you need to know” (Tracy). Other ‘expert’ sources of feedback were “clinical supervisors” (Charlotte), “my textbooks” (Kathryn) and “the [model] answers...
that they put up on Blackboard™” (Kirsty). “Working together in a
group” (Emma) with peers was a potential source of feedback. However, this
feedback tended to be from those who had “done more work on that sort of
thing than you” (Kirsty) or those who have “done either PhysEd or sports-type
degrees” (Nina) so “a lot of the stuff they’re already familiar with” (Nina). In this
situation it was “almost like having another tutor” present (Nina). Sometimes
feedback from ‘non-expert’ peers-as-patients was obtained when undertaking
practical techniques as “they’re the one that can feel it so if it’s hurting or not
comfortable for them, that’s who really needs to tell you” (Neve). However the
preferred source was “someone else that’s perhaps done more or knows more
about that sort of subject” (Kirsty) such as “the people who are teaching you
what you need to know” (Tracy) because “they are the experts” (Jason). This idea
of the source - the agency - of feedback as located entirely externally to the
student was another distinguishing characteristic of this category.

The immediacy of feedback

There was a strong emphasis on the ‘here and now’ in this category. This
emphasis on the present was illustrated in the prevailing use of the present tense
when students talked about experiences of feedback, as illustrated: “somebody
goes around and if we look like we are doing the right thing they won’t interject,
but if you are doing something wrong they will” (Charlotte).
Applying feedback in the classroom environment

In terms of applying feedback, the external parameters of the category were linked most strongly to the context of the immediate academic world: when conceptualising feedback it was related to “tests and assignments” (Tracy) and in learning situations, such as applying “practical techniques and skills” (Nina) in manual therapy class. There was evidence of a slight geographic extension of the category boundary beyond the classroom and practical laboratories to “clinical placements” (Charlotte) in the community. However, for the most part, feedback was a phenomenon that belonged to assessment and the classroom.

A cause-and-effect, linear relationship

The notion of source of feedback, or agency, provided a good example of the internal relationship between the meaning of the category and its structure. An external (and generally) expert agent would broadcast information in the direction of the student. Conceptualising feedback as ‘telling’ was reflected in the unidirectional, transmission-like nature of interacting with information – if feedback was ‘telling’ then engaging with feedback was by ‘being told’. There was no evidence of any internal agency in this category and minimal sense of constructing and exchanging ideas, information and knowledge:
“If they don’t give you any feedback or tell you how it feels, you’ve got no idea what you’re doing or where you’re at or if you’re even on the right track at all” (Britt).

The nature of the relationship between meaning and structure was characterised by a cause-and-effect linear view, where X leads to Y which leads to Z, as illustrated in Figure 4.1:

![Fig 4.1: Relationship between component parts of A: Feedback as telling](image)

The case of Charlotte

Charlotte’s data were used to construct a case study that illustrates different aspects of the ideas typically expressed in A: Feedback as telling. Charlotte was 25 years old and held an undergraduate degree in Science. She had worked for a year in an administration job in New Zealand and had then applied and been admitted to the Bachelor of Physiotherapy programme directly in to the second year, so the interview was conducted half-way through what was Charlotte’s fifth year of
tertiary study. The interview began with the collection of a small amount of
demographic data and Charlotte was then asked to think of and relate any
occasion in her tertiary study where she felt that she had experienced feedback.

Charlotte’s initial reaction was “those are called marks” followed by
laughter. Her first degree “was done at a huge university overseas” so “I don’t
think I would have received a lot of feedback”. For “presentations maybe they
would give you an outline of what you did or what you did well or what you did
poorly” but “as far as one-on-one feedback” Charlotte did not think that she had
“ever received any”. The rationale for this, in Charlotte’s view, was because
“nothing ever involved clinical skills or anything, it was just rote book learning
and that’s the way it was set up”. It was “filling your head with knowledge and
assessing you, if you could regurgitate it”. As such, “if you do have a good mark
that’s feedback that you can, you’ve been able to, you know, regurgitate what
you’ve learnt but not necessarily retain it”. For Charlotte, a mark as feedback was
“actually quite cruel” because “you know, ‘you’re 78 or you’re 82’, this is who you
are” but at the same time “it’s not who you are, it’s your performance on any given
day or three days”. It was her wish that feedback “would be actually a little more
elaborate [than just a mark]” but “unfortunately the way things are set up and
constraints of what other people in the class want” meant Charlotte “didn’t think
it [was] feasible”.

Charlotte recounted a recent experience of feedback in the physiotherapy
programme from a “muscular placement small group”, which she “felt really
more nervous about”. This feedback was from tutors and was more “than just getting a mark” as “there were actually things that were pointed out” which, although “better for you”, had the potential to be a bit “hurtful”. Charlotte “did well” on the placement so “liked the feedback”, but noted “if I would have gotten a worse appraisal of my performance I probably would have used it more critically”. Because she “didn't receive anything bad to say” the feedback “wasn’t that helpful” for her and she “actually wished there were more negative comments”. Having said that though, she thought “at this stage [second year] it would be a little too discouraging to put the negatives on”.

Comments from a tutor were better than a mark because “when it comes to physio there are so many different areas that you could be potentially good or bad at”. In Charlotte’s previous degree “all you would get is a mark and you would assume you were doing it right or wrong”. Physiotherapy, however, was “about people and there is an art form to it”. In terms of skills, “you really need someone to show you these handling skills, or else some of them aren’t innate for a lot of people”. Because she had “never done anything like physio before” Charlotte would get tutors “to show us how it’s supposed to be done” on the rationale that “it’s a skill and if you learn it wrong the first way it is going to be harder to re-teach you”. Charlotte wanted “as much feedback” as possible when on clinical placement, in the form of “is this right?”, “am I doing this right?” and “am I applying it correctly?”. In fact, the “only way” Charlotte knew “that I am doing what I’m supposed to be doing right, is through feedback”.
In relating her experiences of feedback, Charlotte’s emphasis was on getting “assurance that I’m doing it right”. There was a big difference in importance of feedback between her previous, theory-based degree and her current, practical-based study. For “the theory stuff, if you get a poor mark, you kind of assume, well I do, that I didn’t take in as much and I didn’t regurgitate as much information as I possibly could have”. Whereas “for clinical skills it’s really hard to justify why you got a bad mark” because “I think the onus is, I guess, on me to make sure I know that it’s right”.

In summary, data generated by Charlotte was chosen as representative of the category A: Feedback as telling because it illustrated important aspects of the conception. Charlotte’s focus was on finding out what was ‘right’, or that what she was doing was ‘right’. This information always came from the tutor and, without it, Charlotte had no other way of knowing what or how she was doing. Together with the descriptions of the referential and structural aspects of the category, this case study elaborates students’ experiences in A: Feedback as telling.
Part Two: Category B: Feedback as ‘guiding’

Introduction

In this category feedback was conceptualised as not merely transmitted information but as a sense of guidance. The word ‘guidance’ implies a less directive intent. There was more to feedback than just being told the ‘correct answer’. Instead, there was a focus on information content such as ‘working out what is right’ and ‘seeing what I’m doing wrong’. This suggested that students were thinking about feedback information. In this way, this category differs from the previous one by the emergence of self as a source of feedback. Additionally, the focus moved beyond the immediate and into future, albeit abstract, implications. Table 4.4 (overleaf) provides an overview of the main features of this category.
### Table 4.4: Summary of B: Feedback as guiding

<table>
<thead>
<tr>
<th>What is information?</th>
<th>Fixed, solid but interpretation includes input from other than just ‘expert’</th>
</tr>
</thead>
<tbody>
<tr>
<td>What content is the student focused on?</td>
<td>Factual information as per A; evaluative information on task performance and potential improvement</td>
</tr>
<tr>
<td>Where does feedback come from?</td>
<td>Mainly external agents; usually prioritise ‘expert’ source; some attention paid to peer input; emergence of internal agency - own thoughts, own sense of feel</td>
</tr>
<tr>
<td>What is the direction of feedback?</td>
<td>Mainly unidirectional; transmit-receive-occasional response reaction</td>
</tr>
<tr>
<td>What is the view of time?</td>
<td>Mainly present as per A; occasional abstract implication to future</td>
</tr>
<tr>
<td>In which situations can feedback be applied?</td>
<td>Relevance to academic world, in-class and studying at home</td>
</tr>
</tbody>
</table>
Referential aspects

Students’ focus

The referential aspect (the ‘what’) of this category was feedback as information that was seen as guidance. Feedback was “any form of information that you receive on how well you’ve sort of done” (Bekah), “taking the way, or what you’ve done into account” (Tim) and finding out “what is expected of me” (Celia). The information was “a reassurance thing in some ways, I feel, or a clarifying method” (Deborah) and was for “reinforcing what I’m doing, letting me know that I’m doing it right or I’m doing it wrong, how I can improve... it’s not necessarily telling us what to do but pointing us in the right direction and making us find out for ourselves... just being there to guide us really” (Britt). There was a focus on “what was expected” (Bekah) in terms of “letting us know just exactly what she [the lecturer] expects of us” (Britt). Related to expectations and knowing what was right, there was also a focus on working out “if you are on the right track or the wrong track” (Nadia).

An emphasis on content dependent on the situation

As noted directly above, the emphasis in B: Feedback as guiding was on finding out “how I’m doing” (David), “how you’re going with your paper” (Bekah) and seeing “that we’ve got everything right, in our way of thinking” (Nettie). Feedback was “being able to do some work and then analyse it” (Belinda), looking at “what you
could do to do better or how to improve what you are doing” (Celia). As such, students in this category tended to emphasise feedback in learning situations over feedback from assessment situations. For example, “when we do our musculoskeletal labs, you’re always getting feedback” (Donna) and this was found to be “always quite helpful” (Bekah). Feedback from an assessment task “was pretty minimal” (Deborah) and had less attention paid to it, and it was more a case of “done that [assessment], get it out of the way” (Donna).

The importance of feedback for manual skills

With regard to the kind of feedback, there was a difference noted between getting feedback from practical subjects compared to theoretical subjects. The importance of feedback on the practical subjects was emphasised:

“I guess the theoretical stuff, is not as important for me to get feedback on, I can look it up in text books and lots of other stuff, and that’s more of a self-searching feedback…whereas the practical stuff is really hands-on and you need to be able to see somebody else doing it…so that’s where the feedback is important, where you can’t get it from anywhere else, I think, where you can’t search those answers out anywhere else” (Belinda)
Related to the emphasis on feedback in the practical, therapeutic skills-based subjects was the suggestion of responsibility. Making “sure you are doing it properly” (Belinda) was reason for seeking feedback because “[you] don’t want to put anyone at harm” (Britt). The awareness on responsibility was illustrated clearly:

“I think I find it really important especially now that I’m doing something that involves interacting with other people…I feel as though I need to know the stuff now; it’s not just me on the line…I mean it’s not just…like Health Science when it was like ‘I need to know this about physics and if I don’t know, well, I suffer’, but it’s now ‘I need to know and I need to know because I’m working on a person’…I feel a higher level of responsibility” (Deborah)

and, for this, feedback as guidance in one’s own learning appeared to be of significance.
Structural aspects

Guiding rather than telling

A structural aspect emerged that gave B: Feedback as guiding a distinctive characteristic: students indicated they were thinking about the information they were receiving. Thinking about feedback occurred with regard to written tasks, for example “I would read it and think about it and then re-look at the question and see how I, using the feedback…what would I do differently to answer the question” (Nadia) and with regard to practical tasks also:

“I suppose if I’m performing a technique and it doesn’t feel right, I’ll ask for feedback, and they might say ‘you’re not quite on the right spot’, so then you might just have to step back and then kind of think about it again…quite often I find it’s easier, just from taking that little break and thinking about what’s been said to me” (Nettie).

Once it had been thought about, feedback could be disregarded, for example “well, I’ll think about it and then, if I think it’s good then, yeah, I’ll take it, if I don’t think it’s good I’ll just discard it” (Maya). This was particularly so if the feedback was deemed to be opinion-based, rather than about a fact: “I really had to weigh whether it was applicable to me or whether it wasn’t and really put it into perspective… ‘cause if it’s their perception then they’re going to be taking all their beliefs into it and that’s not going to make it right or wrong, it could be
either” (Brenda). The emphasis on thinking about the feedback varied from a lesser to a greater extent, but it was none-the-less present consistently in this category. Thus this characteristic was a point of difference to the previous category; it was evident that feedback was something that was thought about, to take some direction or guidance from.

**The emergence of self as a source**

The indication of thinking about guidance received revealed another distinctive characteristic of this category, in that feedback could come “either from yourself or from someone else” (Donna). In other words, attention was given to both external and internal sources of feedback. External feedback came from “those who were doing the marking and those who would be directly involved in teaching” (David), “my peers” (Fiona), “the [clinical] supervisors” (Brenda), “a lot of feedback from the actual patient” (Deborah) and “even from the textbook if you’re desperate” (Nettie). Internal feedback was evidenced by self-reflective statements such as “how I have noticed what I’m doing” (Brenda) and “when I’m doing things I think about what I’m doing and somehow give myself feedback...I think it’s more reflecting back on things that I do know…. I’ll look at what I was doing and I correct myself” (Deborah).

There was also evidence that pointed to an internal source of feedback that students identified as ‘kinaesthetic sense’. Kinaesthetic sense was used to describe
a sense of ‘feel’. It was the sensory information coming back to the student from their own sensory receptors in their muscles, joints and skin. This kinaesthetic feedback, not mentioned previously, was “the feeling of whether I’m doing it right” (Nettie). It was generated within the student usually whilst being on either the receiving end or on the applying end of a practical technique. When receiving a technique, the student “felt the feedback of having it done to me and going ‘oh, that doesn’t feel right’ and almost noting to myself not to do that” (Deborah, her emphasis). When applying a practical technique such as massage, for example, “you feel someone with a knot and you give them a massage and it kind of disappears, then I suppose that’s giving you feedback in a way ‘cause you’re feeling that it’s disappearing” (Celia). This kinaesthetic sense of “feeling the right movement” (Donna) was “like feedback for yourself when you’re performing it. If you can feel it moving then you know you’ve got the right spot; if you can’t, then you’re not doing it right” (Bekah).

An abstract orientation to the future

The temporal focus in this category was on both the present and future situations, from wanting “to know that I am on track” (Bekah) to “knowing how to improve” (Maya) and “how I can get better” (Brenda). Taking the feedback received now and being able to think about applying it in the future was “important, because I always like to know how I can improve” (Celia); so important in fact that “you wouldn’t be getting anywhere without it…[if] you
didn’t get any feedback on anything…the only way you’re going to improve is to know where you went wrong, it’s like the classic saying, ‘learn from your mistakes’” (Tim). The notion of applying feedback to the future was relatively abstract, in that the future situation was non-specific and general, for example “someone reporting back with how well you’ve done or how you have done something and what could be done better” (Neve).

A focus on feedback in learning environments

The boundary of this category was mainly defined by the context of the academic world. There was some emphasis on the assessment aspects of that world (tests, assignments, exams) but what was more notable in this category was an increased emphasis on the learning situations as related to the academic world - lab classes, being on supervised clinical placements, working with peers outside of class times:

“My friends and I get together and we have a study group that we get together every week, we’ll focus on anatomy and on all the techniques that we do, and then try to do them, and we give each other feedback” (Celia)
A sequential, circular relationship

There was a logical internal relation between the ‘what’ of the category and the ‘how’ of the category. The component parts of B: Feedback as guiding demonstrated a sequential relationship, in terms of X leading to Y leading to Z. For example, the referential aspect of the category was feedback as information that guided; the structural aspect of communication was that information was not told or transmitted, so much as used for directing and pointing students in ‘the right direction’. The lesser emphasis on ‘telling’ of information and greater emphasis on considering and interpreting feedback, was consistent with the implication behind the term ‘guidance’ - a degree of thinking was required on the part of the student. Because of the evidence that students were now considering and thinking about feedback, the agency of feedback was found not only external to the student but internally as well. The relationship was circular; students were thinking about feedback and then (potentially) revisiting current learning tasks as well as (potentially) applying information to future learning tasks. A schematic of the relationship is represented as Figure 4.2 (overleaf). The solid lines in the figure indicate what is emphasised in the structural relationship of the category. The dashed lines represent components of the relationship that are less accentuated, such as students revisiting the task.
Donna’s experience

Donna’s experience illustrates much of the focus and structure in B: Feedback as guiding. Donna had completed her secondary school education and in the preceding year had undertaken the Health Science First Year programme at Otago. She had recently turned 20 years of age and was now in her second year of tertiary study, having been admitted to the Bachelor of Physiotherapy degree programme. As was practice, the interview commenced with a few demographic questions and then Donna was asked to think of and then relate an example of feedback from her tertiary study thus far.
In Donna’s experience, feedback was “whenever you get any marks back from any assignment or test”. For Donna it wasn’t about being told, it was more that “sometimes it’s not even things that I think I’ve got wrong, it might be things like ‘I’ll check that and see if that was right’”. In situations like this, she would resort to “self-feedback, kind of thing”. This meant that “after a test” Donna would get together with peers and “compare answers, or go and look up in our textbooks” questions they weren’t sure about. By “looking up the proper answer” Donna found it would “stick for the future” so she could “get it right then”. A specific experience of feedback Donna recalled was after the anatomy test in the first semester. She “couldn’t really remember what I’d answered in the first place” so going back through the test “kind of reinforced that I did actually know things”. For the ones she got wrong Donna found it “helpful to know either they were wrong because of the way I’d written them or because of what I’d put as my answer”. By having her test and being able to look at her answers, she was able to discuss with the tutor, with peers or “go and look into your textbooks, find out why it’s wrong and then you’re like ‘ah, OK, right, got it’” – rather than being told the answer outright.

Donna also experienced feedback from “when we do our musculoskeletal labs, you’re always getting feedback from the person you’re doing techniques on”. Comments from the non-expert peer such as “that doesn’t feel right” or “yeah that’s good” would be added to by directive comments from the tutor, for example “you put your hands like this”. Also, Donna found “you can often just
tell by the way that you’re doing it that you’re doing it right by feeling the right movement or seeing the right results or whatever”. From her sporting background Donna was accustomed to utilising herself as a source of feedback and thought that “a lot of the time you can expect what it’s meant to feel like” or “you can kind of guess what it’s meant to be like”. Occasionally in these musculoskeletal labs “if we’re really not sure about what it’s meant to be like we’ll get the demonstrator to do, like, a mobilisation on my shoulder”. Donna would then “get the other person to do it” on her and make comment such as “no it doesn’t feel the same as when he [the demonstrator] did it”. Because she “kind of knew what it’s meant to be like” Donna was able to use herself and her sense of feel as a conduit for feedback without necessarily being ‘an expert’. With these experiences, Donna summarised feedback as “information you’re getting back on how well you did something, I guess, either from yourself or from someone else”.

The focus for Donna was on figuring out what she had done wrong “otherwise you don’t know where you’re going to go wrong in the future”. Just receiving a grade and not being able “to see which ones you’ve got right” meant that “you don’t really know which ones you’ve answered correctly or not”. A lack of feedback was a source of frustration for Donna, because “you come to uni to learn”. The way she saw it “you’re given this test and you prove what you know, but there’s always going to be those bits that you don’t know” so, “it’s kind of like you want to be the best you can be, but if you don’t know where you’re not going right, then it’s hard to”. For this, Donna wanted some guidance in the right
direction to make sure she wasn’t going to be “even further off track”. The crux of Donna’s experience of feedback was “just that *not* knowing I think, *not* knowing which bits you’re doing wrong, I mean, they don’t need to *tell* you the answer, they just need to say ‘that question, you got wrong’ because then you can go and find out for yourself” (Donna’s emphases).
Part Three: Category C: Feedback as ‘developing understanding’

Introduction

Feedback in this category was conceptualised as information that led to understanding. Information was gathered from a range of sources both external and internal to the students. Students then focused on the information to seek explanation and comprehension of concepts. Feedback information was reflected on, deliberated and considered, potentially moulded and then applied to novel situations to check understanding. This process of intake, contemplation, output and evaluation was suggestive of a learning cycle, with a purposeful emphasis on improvement for future tasks. Table 4.5 (overleaf) provides a summary of this category.
Table 4.5: Summary of C: Feedback as developing understanding

<table>
<thead>
<tr>
<th>What is information?</th>
<th>Firm but not fixed, can be crafted for understanding</th>
</tr>
</thead>
<tbody>
<tr>
<td>What content is the student focused on?</td>
<td>Factual information from assessment; explanatory information for understanding and improvement</td>
</tr>
<tr>
<td>Where does feedback come from?</td>
<td>External and internal agencies – occasional reassurance sought from expert, but less reliance</td>
</tr>
<tr>
<td>What is the direction of feedback?</td>
<td>Multidirectional; deliberation, comprehension of concepts,</td>
</tr>
<tr>
<td>What is the view of time?</td>
<td>Emphasis on understanding present situation plus application to future task</td>
</tr>
<tr>
<td>In which situations can feedback be applied?</td>
<td>Relevance across subjects in academic life and also beyond to professional life</td>
</tr>
</tbody>
</table>
Referential aspects

A focus on knowledge, performance and comprehending concepts

The referential aspect (the ‘what’) of this category contained a distinct focus on obtaining and creating understanding. The ‘understanding’ was about a variety of different content elements. There was a focus on feedback for understanding knowledge, in terms of “getting the correct answer and then also an explanation of why that answer came about” (Michelle). An explanation was considered useful “so that you understand and get a good mark…the understanding is more important” (Lisa). There was a focus on feedback as a comment on performance, such as “what you’re doing well…what you’re doing wrong…what you need to improve” (Ewan) for the purpose of “understanding your own thought processes” (Tessa). There was also a focus on understanding concepts, with feedback as “conversation and discussion and thought about the concepts” (Ewan), particularly “talking about the concept…[so you could] explore and look it up again to make sure you fully understand” (Michelle).

Contextual differentiation, but the meaning remains the same

Students distinguished feedback related to ‘assessments’ from feedback related to ‘learning situations’ in this category. Explicitly stated, “feedback from an assessment would be the mark” (Lisa). This was used to get an understanding of “what the mark means, what you could’ve done better, what you did to get that
mark, what you did badly… that kind of thing” (Lisa). Feedback from assessment was also when one was “given the answers…so we could go over them and then we could see the ones we got wrong and then we could go back on our notes to see if we understood the concept” (Michelle).

This view of feedback as related to assessment situations was differentiated from feedback in situations “when you are learning something” (Lisa). For example, a review session (a learning situation) was identified as “actually being feedback” (Tessa) and “was really good, because it’s just seeing where you went wrong” (Tessa). In learning situations “you get given feedback, it’s not to do with the assessment…like, when we were learning all those techniques in applied science” (Lisa). Learning-related feedback was described as being “instructional feedback” (Ewan) without which the “learning experience would be lessened…especially with applied stuff” (Ewan) and in these learning situations “feedback is very important, all the time” (Lisa). The emphasis was very much about “looking for an understanding when I am learning” (Michelle). For one participant, the difference in context of feedback was also linked to temporal elements:

“Well, some of the practical [learning] it’s more to do with the fact that it’s immediate feedback, so as soon as you do something you’ve got the feedback and then you can change it from there. Whereas in the exam situation, you do your exam, you wait, you get the feedback…it doesn’t really happen so immediately, so you don’t really make the changes that you should” (Tessa).
In summary, although students distinguished between ‘assessment situations’ and ‘learning situations’, the point of feedback remained: it was “an understanding of what you’re doing, how you’re doing it, how you could do better” (Tessa), whether it be an understanding of a concept behind an assessment-related task, or an understanding of a concept in learning situations.

Structural aspects

Introduction

The structure of this category contained an emphasis on the requirement of feedback to help create improvement, which suggested a focus on the future. There was also an emphasis on attending to and utilising internal sources of feedback. Rather than information just being told, feedback was about “getting as much information from as many places as possible [to] try to put it together to get one big picture” (Tessa). In other words, the focus was on the pursuit of understanding.

Future-focussed

This category contained a strong temporal orientation to the future, and this distinctive feature was a characteristic of the category. The point of feedback was “to be able to carry out the task better” (Michelle) so one would “have a better
With a future-related emphasis, feedback was vital for understanding your own thought processes…because you can kind of work on them next time” (Tessa). The orientation of the category to the future was linked to a strong focus on “feedback as part of improvement” (Ewan), “for changing things and for improving” (Tessa). There was a focus on application of understanding to future tasks, for example “you really want to get your head around the techniques for [future] practicals” (Tessa). There was also a focus on a more general application of understanding, because “when you can apply your understanding to answering a question then that consolidates your understanding” (Michelle).

### Attending to internal sources of feedback

Another distinctive characteristic in this category was the increased attention to feedback from internal sources. Internal feedback arose from a process of “thinking about things” (Ewan). Information was gathered and by “a purely mental process” (Tessa) one would “have a look at it by myself first…and try and work it out” (Lisa). It was important to have “time to think about it yourself” (Ewan). In fact, in some instances, it was preferable not to be told information, because “some things are better done by discovery… I don’t really want someone to tell me what it is” (Ewan).
There was also an emphasis on an internally generated kinaesthetic sense, for example “finding what’s comfortable for you…when you’re doing it with your hands, what feels right…what it should feel like, how you can change it to make it feel the way it should” (Tessa). Sometimes input would come from an external source (for example, the tutor) and this would be used to help strengthen an internal ‘sense of feel’:

“If you just can’t get it right, you can say ‘can you please show me again’ and when the tutor shows you on yourself then that can be feedback, sort of things. So when you could feel it on yourself, then your team mate or your class mate can practice that on you and you go ‘yep, that is how I felt it when the tutor did it’” (Michelle).

A variety of external sources of feedback were noted, including “peers” (Tessa), “feedback from my tutor” (Lisa), sometimes “the textbook” (Michelle) or “the person who can answer the tricky questions” (Ewan) - usually the lecturer. However, there was less reliance on expert external input, as “it’s only when I really don’t understand something that I’ll go with the [external] feedback” (Tessa, her emphasis).
Differing boundaries for different contexts

The contextual variation found in the referential aspect of the category (see above) was reflected in the ways the category was delimited in terms of application. ‘Feedback as gaining understanding’ in assessment situations was confined to tests, exams and assignments, in other words the assessed academic world. The external parameters for ‘feedback as gaining understanding’ in learning situations were broader:

“If I don’t figure it out then it’s not in the long term memory, it’s something that I can learn for an exam, sure I can memorise for an exam, but then how are you going to apply it after you’ve done the exam” (Ewan).

Obtaining an understanding had implications for future, professional application because “if you don’t understand why you’re doing something there’s no point being a physio” (Ewan).

An iterative, purposeful relationship

There was a strong association between the referential and structural aspects of the category; the internal relationship between the meaning of the category and the structure was a purposeful, connected one. Feedback was ‘developing
understanding’, and this understanding was achieved by reflecting on external feedback and generating internal feedback and then really thinking about it, trying to understand, for both current and future use. For example, “if people are giving me feedback, I guess I’m just listening and really trying to understand what they’re saying, and if I don’t [understand] I just have to ask again” (Deborah, her emphasis). The process of reaching understanding was an iterative, purposeful one and resembled the act of learning, as illustrated in Figure 4.3:

![Diagram of Feedback as Developing Understanding](image)

*Fig 4.3: Relationship between component parts of C: Feedback as developing understanding*
Michelle’s experience

Michelle’s experience best illustrates the ideas expressed in C: Feedback as developing understanding. Michelle had completed her secondary school education and had then undertaken the Health Science First Year programme at Otago. She had recently turned 20 years of age and was now mid-way through her second year of tertiary study, having been accepted into the Bachelor of Physiotherapy programme based on her first year results. Michelle was asked to relate an experience of feedback from her tertiary experience thus far, and this formed a contextual starting point for the remainder of the conversation.

The first experience of feedback that sprung to mind for Michelle was being “given the answers sometimes to multi-choice questions so we could go over them”. Michelle would “see the ones we got wrong and then we could go back on our notes to see if we understood the concept”. In this situation “if you said ‘I don’t quite understand why I got this wrong’ the tutor there and then would talk about the concept with you”. Occasionally there would be “an answer sheet that you can download from Blackboard” and she would go through the same process “to make sure I knew it, if I’d got it wrong”. Michelle was keen on finding out “which ones I didn’t quite understand” because “if you don’t know which ones you got wrong then you can never explore and look it up again to make sure you fully understand the concept”. If she did not understand something, Michelle would “talk through it with my friends and also just approach the lecturers, because they were very open and welcome for you to talk about
things you didn’t understand”. After asking “we’re talking about feedback in
terms of results from a test sort of thing, are we?” Michelle went on to relate
feedback she had experienced from “practical classes for physio”. When
practising techniques there was “feedback from the patient, or the peer pretending
to be the patient” and “also from the tutor, whether I am in the right position, am
I doing it right”. There was also Michelle’s “own sensory feel” or
“proprioception” in terms of “where I put my arms” and “what it feels like to do
it right”. To Michelle “that sort of feedback is just as important as verbal or
written feedback from teachers” because “the only way you can do the technique
correct is by practice, and then by practice you get the feel of it and so what
you’re actually practising for is to get the feel right”.

Michelle learned “a lot from tests” and felt she learned “a lot more going up
to the test than just going through notes throughout the year” because of “the
sense of urgency to actually be able to understand the concepts and be able to
answer the question”. In particular, she liked using test questions as a form of
feedback to “guide understanding” because “the questions highlighted the points,
the main objectives within each of the lecture series that we were looking at”.
Michelle’s experience was “we just go to a lecture and we get all this information”
after which she would “write out notes and try and have an understanding of it”.
Using test questions helped Michelle to “define the information in to categories
and also to make links between how bits of information are related”. Michelle
took a “systematic approach” to study, tending to “break it down to the parts and
understand them”. She found that “questions helped me put it all together” in a meaningful way.

The way Michelle saw it there was “intrinsic feedback and extrinsic feedback”. Intrinsic feedback was “the feedback within my limbs or sensation, like, the kind of feedback I can give myself”. This sort of feedback “in a learning situation is most important initially” because “after quite a few goes of practicing it [a technique] then you feel that you’re doing it right, and that’s when your own feedback can sometimes stop”. Sometimes, however, “you can’t use that sort of feedback, it needs to be feedback from someone else”. Extrinsic feedback from “what other people are saying” or asking peers “how they’ve interpreted the information or what they think about a certain technique or treatment” was used by Michelle to “carry out the task better or have a better understanding”. Even extrinsic feedback such as “being told what the correct answer is” was valuable, either because “if it’s about a concept that I thought differently of, then I would obviously look into or ask for a bit of advice on how it works” or because “if there’s a concept that I do understand then it, um, helps me feel more confident about understanding that concept”. Michelle had various sources of ‘intrinsic’ and ‘extrinsic’ feedback and thought she was “very active overall” in seeking feedback. If there was something she did not understand, Michelle would “always write it down in the form of a question” and then “ask peers or ask the lecturer or try and apply it to another set of information”. Another technique for figuring out answers was to “develop a question from an article” and then “go and study
my lecture notes or read the textbook”. Michelle acknowledged that although she was generally “looking for an understanding”, sometimes she was looking for “what was the answer” so she could “go on and learn how to do it correctly”.

The absence of any form of ‘extrinsic’ feedback would make it harder for Michelle to know if she had “done it right or wrong”. The same task on subsequent occasions would be attempted similarly to the previous time “because at that stage that’s what I thought was correct” and thus, in Michelle’s view, “you can’t improve without feedback”. Having said that, Michelle “couldn’t really imagine a situation” where one could not get any feedback at all “because you have always got intrinsic feedback”. For Michelle this ‘intrinsic’ feedback could be kinaesthetic in terms of “where my joints are, what muscles I’m using, what if feels like from sensation” and it could also be “processes of understanding the information and sorting it out” mentally “to come up with the optimal way of doing it”.

In summary, whether feedback was from external or internal sources, for Michelle it was all about “understanding how I’d figured it out”. The essence of this category was illustrated in the following quote:

“We are actually learning how to do our job, so our understanding is far more important than the test result” (Michelle’s emphases).
Part Four: Category D: Feedback as ‘opening up a different perspective’

Introduction

This category was about feedback as information that led to looking at situations in a new way. Information was evaluated on whether it made sense or not, and what contribution it made to a different perspective, with a lesser emphasis on whether the information was factually ‘correct’. As mentioned previously, this category of feedback was discerned once the other categories had been differentiated and was expressed by a small number of participants. Michelle, whose data were mainly associated with the previous category, occasionally expressed ideas that seemed more aligned with this category. In addition, data from Tim also contributed to this category. However it was predominantly Karl who articulated the ideas that formed this category, so illustrative quotes are attributed to him unless specified otherwise. A summary of the features of this category is presented in Table 4.6 (overleaf).
### Table 4.6: Summary of D: Feedback as opening up a different perspective

<table>
<thead>
<tr>
<th>What is information?</th>
<th>Not solid or fixed, can be manipulated and questioned</th>
</tr>
</thead>
<tbody>
<tr>
<td>What content is the student focused on?</td>
<td>Information that shows or explains alternative ways of viewing a situation; does not have to be ‘right answer’</td>
</tr>
<tr>
<td>Where does feedback come from?</td>
<td>External and internal agencies – open to all ideas even if not ‘correct’</td>
</tr>
<tr>
<td>What is the direction of feedback?</td>
<td>Multidirectional; considered reflection, convey alternate views</td>
</tr>
<tr>
<td>What is the view of time?</td>
<td>Present and future oriented – viewing a situation differently now and in the future, also reference to past</td>
</tr>
<tr>
<td>In which situations can feedback be applied?</td>
<td>Broader scope of academic world and beyond to general learning, view of the world</td>
</tr>
</tbody>
</table>
Referential aspects

A focus on making sense of alternate views

The referential aspect (the ‘what’) of this category was the view of feedback as ‘a different perspective’. The focus was on “seeing where I went wrong”, getting it “correct next time” and finding “new ways of thinking of things” (Michelle). There was an emphasis on “thinking it through yourself”, figuring out “why did I write it that way” and looking at “how I answered it before and how I would answer it now”. Being able to “think from another point of view” was intertwined with “making sense” of things; the emphasis was not on merely knowing the correct answer but on trying “to actually find information that really makes me understand and makes sense to me”.

Sometimes “a view from someone else…could be wrong”. This interest in obtaining a different view of a situation, despite the fact that the view may be incorrect, was a distinctive feature of this category. It was not so important to obtain the correct answer because often “there’s not actually a right answer, there’s a lot of ways to do it” particularly with regards to practical techniques. Instead, “discussing something with your peer, although it could be wrong” was actually good because one got “to hear what how they thought about that question” and from that “sometimes you can actually gain something from what they think”. In this way, feedback as ‘a different perspective’ seemed connected to the act of learning.
A strategic, considered focus

The focus in this category had a strategic slant to it, in that a different point of view might lead to understanding for passing tests and exams, for example “what sort of perspective can I change to gain that [better] mark”. A different point of view via feedback could also be useful for learning practical techniques “because a lot of different techniques have different ways to actually perform that technique” and a different view could help. There was no differentiation based on academic context in this category - feedback as ‘opening up a different perspective’ was equally cogent when thinking about feedback from ‘assessment situations’ as feedback during ‘learning situations’.

Structural aspects

Introduction

Several references were made to sensory experiences in the structural aspects of this category. For example, obtaining a different perspective could be achieved visually by “looking at things differently” and “seeing things again”, perhaps from “a different angle”. Also it was possible to “listen to what other people are saying” (Michelle) and then “see how you feel about it” (Michelle). In this way, information in this category was reflected on in a multi-faceted manner: it was thought about, looked at, listened to and compared to known perspectives.
Questioning the information

In this category the student was the mediator of feedback. Rather than being taken as fact, information could be *questioned*. For example “a lot of times when I’m not sure of the question and I get an answer…I doubt it, I strongly doubt it”. This questioning of information was a distinctive characteristic of this category. The questioning often led students on to another act of learning, as they would “go to someone else, go to something different, like, check the text book…just go to some where else that could provide new information”. Reflecting on the different perspectives offered by internal sources (e.g. thinking about things) and external sources of feedback (e.g. textbooks, tutors, friends) suggested a link between feedback and the way students went about learning. For example, Michelle commented:

> “Well, I think about it and try and see how they’ve come up with that way of thinking and why they think, why they are thinking in that way, sort of thing, and if I can understand that, then I usually kind of look at the two points of view, of how I was originally thinking about it and how they were thinking about it and what I think about each point of view, sort of thing” (Michelle)
**Applications across time**

The above quote from Michelle illustrates another characteristic of this category: the manner in which ‘a different perspective’ was applied to multiple elements of time. A reference to the past, in terms of “how I was originally thinking about it” (Michelle) was followed by a focus on the present, as in “what I think now” (Michelle) and also “how to improve it for next time”. The temporal orientation to the future for ‘improvement’ also seemed to link feedback to the act of learning: “lets say a question is wrong…with the feedback that person can prove to me what's wrong, to make it correct next time”.

**Broader borders**

In terms of the parameters of application, there was a global orientation in

*D: Feedback as opening up a different perspective*. Notions of feedback were integrated into the student’s view of the world:

“When I was finding out why the sky’s blue it took me, say, two years. Well I wasn’t, sort of, every day seeking for it but I was, I asked a lot of people and the hardest thing is a lot of people have just never thought about the question…I think a lot of random things, in the world, I can just walk down the street and I can look on the road, ‘oh why is, why is there a patch of mud on the
footpath and everywhere else is clean?...even that sort of thing can make me just think.”

Thus the external boundary of the category went beyond the assessed academic world of “going through [test] questions” and learning situations - such as “every single lab, it might not be feedback after a test or an exam but, just daily going through some different techniques” - to the broader world beyond: “throughout life really, everyone sort of needs feedback to know, so they can, to develop” (Tim).

An integrated experience

The internal relationship between the ‘what’ and the ‘how’ of this category was an integrated one. The referential aspect was feedback as ‘a different perspective’. The structural aspects involved gathering different views, questioning these views and reflecting upon information. This led then to the student looking at things in different ways, gaining understanding of different ways of seeing things and applying this perspective to future tasks. The recurring nature of this process was indicative of a link between the view of feedback as ‘opening up a different perspective’ and the act of learning. The way these aspects related to each other is illustrated in Figure 4.4 (overleaf).
As mentioned previously, it was mainly one student - Karl - who expressed feedback as ‘opening up a different perspective’, and his data have been used to construct an illustrative case. Karl had recently turned 21 years of age, which
made him slightly older than the typical 19-20 year olds in the class, and he was
from south-east Asia - consequently English was not his first language. He had
completed all of his primary and secondary schooling in his home country and
had then moved to New Zealand. Two years previously Karl had attended the
Foundation Year programme at Otago University, which is designed as a ‘bridging
year’ between school and university for students who have had their secondary
schooling elsewhere than New Zealand. Following the Foundation Year he then
undertook the Health Science First Year programme at Otago. Having been
accepted into the Physiotherapy bachelor’s degree programme, Karl was in his
third year of tertiary study at the time of the interview. As was standard, the
research interview conversation commenced with a few demographic questions
and then Karl was asked to talk about an experience of feedback during the past
two and a half years. The experience then formed a contextual starting point for
the remainder of the interview.

When asked if he could think of a time when he had experienced feedback
in his tertiary study history, Karl said there were “many times, actually” that he
could think of. These times were typically after small “topic tests” in the
Foundation Year classes or in the tutorials run by the Otago University Student’s
Association for students in the Health Science programme. For Karl, feedback
was “going through every question” from these tests, after which there would be
the opportunity to “ask questions if you’re not sure why the answer’s the way that
she [the teacher] marked it”. If he or someone else in the class “still didn’t get it,
then it’s discussed”. As well as these ‘in-class’ experiences, Karl said that after class “the teachers would always stay for longer” in order to “talk to anyone who wanted more feedback”.

Another example of feedback that Karl related was following the Anatomy circuit test earlier in the year. For Karl, this was “a different form of feedback” rather than just going through the questions. This was “more in the self-directed feedback instead of the teacher saying ‘ok, this should be answered like this’ blah blah” and it made Karl “think through it again”. By looking at the anatomical prosections and models used in the circuit test as well as his answers to the questions, Karl would analyse his thought processes and “sort of think how I answered it before and how would I answer it now?” Karl thought that going back through his answers and having the material from the test to look at was “good, because it changes your perspective”.

A further example of feedback related by Karl was “some feedback on the practical papers - the musculoskeletal”. He and some colleagues had “questions we weren’t sure of [so] we went to see the tutor and we were taken straight onto the rooms where they had the plinth, so we can actually do the movements”. The opportunity to perform the particular technique again, as well as to “visualise and talk through about the movements” with the tutor was good. This kind of feedback was not “feedback after a test or an exam” but instead was “going through some different techniques”, something that he now experienced “daily” in “every single lab”. Although he identified and related the situation as being
feedback, Karl noted that “compared to the normal ‘going through questions’ sort of feedback, it was very different”.

From the illustrative quotes above, it can be seen that much of Karl’s experience of feedback was a variety of situations associated with the academic world. Most commonly, feedback was ‘going through questions’, but feedback was also being able to stay after class and talk things through with a tutor, looking at his own test papers and thinking through the answers he had given (rather than being told the answer) as well as being able to review, with peers and a tutor, various practical techniques and become accustomed to the look/feel of the movements. In all of these experiences the point of the exercise was not necessarily to get the correct answer; instead what Karl wanted was to get many “different perspectives” on the situation. Karl was clear about this: “after studying physio you realise a lot of treatments or techniques they use on patients are not clinically proven. There’s not actually a right answer, there’s lots of ways to do it - and this is what I found from seeking feedback from tutors, there’s no right answer, there’s many ways you can do it”. With this point of view of knowledge as being more than just one correct answer, Karl’s definition of feedback was that feedback was “a view from a different perspective”. Karl’s notion of feedback resembled the act of learning - a different perspective would lead Karl on a path to figuring out alternate answers himself. Karl’s engagement with feedback resembled a reflective act of learning because it was cyclic. He would listen to different perspectives from people, think about his own answers
and why he might have done something in the way that he did, and then seek to identify what sort of perspective would best help him understand.

In summary, Karl’s data provides a clear example of the view of feedback as ‘opening up a different perspective’. This different perspective came from external sources like tutors, lecturers, peers and textbooks, and also from internally by Karl thinking about his own answers and techniques. The information that came from these quarters could be questioned - including that from an ‘expert’ - if it didn’t make sense to Karl. He was “always questioning things” and would “try to find, in any way, to actually find information that really makes me understand and makes sense”. This information may be wrong, but the different viewpoint held by the source could be used by Karl to help him figure out his own thoughts, and thus the connection to the act of learning. The referential and structural elements of the conception were intertwined: the ‘what’ of feedback was a different perspective; ‘how’ this different perspective was obtained was by getting many different views (or pieces of information) on the situation, looking at them and the situation differently and learning from these views.
Summary of the referential and structural aspects of the meaning of feedback

The data presented in this chapter represent the outcome space of a phenomenographic analysis of the interview transcripts. In this study, it was the students’ perspective on feedback that was sought, in terms of ‘what’ students thought feedback was, and ‘how’ their understandings were structured. Four different ways of conceptualising feedback were identified, forming the categories of description of A: Feedback as telling, B: Feedback as guiding, C: Feedback as developing understanding, and D: Feedback as opening up a different perspective. Each category contained a particular emphasis on different elements, and the emphasis on what was figural shifted and changed as the complexity of the categories increased. Detailed in the sections above, the elements have been highlighted using illustrative quotes direct from the transcripts, in an attempt to preserve as much authenticity for the student voice as possible. For it is this voice, this view of feedback from students’ perspectives that is the key contribution of the data in this chapter.
Chapter Five

Dimensions of, and students' responses to, feedback

Illustration adapted from Gray, 1918, Figure 973
Chapter Outline

In this chapter, results are reported in three parts. Firstly, the four categories of description detailed previously are analysed from a horizontal, cross-category point of view. The manner in which various figural elements arise and alter across the categories reflect the categories’ relations across the outcome space. In Part Two of the chapter, the focus is on students’ responses to feedback. Results are put forward to address the research questions ‘how do undergraduate students respond to feedback?’ and ‘what is the relationship between these students’ conceptions and their responses to feedback?’. The chapter concludes with a global summation of the research findings.
Part One: Dimensions of feedback

Introduction

When the four categories described in Chapter Four were subjected to a second tier, cross-category analysis, several themes became evident. Variation in meaning within the themes across the categories suggested dimensional characteristics. In this study, a dimension is understood to mean a common element that is evident across the outcome space, but in which there are a range of meanings. For example, most students referred to or implied different aspects of time when discussing feedback, which suggested a temporal dimension. The range of meaning within the dimensions can be related to the notion of themes of expanding awareness (Åkerlind, 2005b). Each of the dimensions has been summarised in table form and then elaborated in the text that follows.
The meaning of information

Table 5.1: Summary of the dimensional variation in the ‘meaning of information’

<table>
<thead>
<tr>
<th></th>
<th>A: Feedback as telling</th>
<th>B: Feedback as guiding</th>
<th>C: Feedback as developing understanding</th>
<th>D: Feedback as opening up a different perspective</th>
</tr>
</thead>
<tbody>
<tr>
<td>The ‘meaning of information’</td>
<td>Fixed, solid, interpreted in one ‘correct’ way</td>
<td>Fixed, solid but interpretation includes other input</td>
<td>Firm but not fixed, can be crafted for understanding</td>
<td>Not solid or fixed, can be manipulated and questioned</td>
</tr>
</tbody>
</table>

The dimension labelled ‘the meaning of information’ describes the way in which the students referred to and understood feedback as ‘information’. As reported in Chapter Four, the idea of feedback as ‘information’ was a global but tacit notion that appeared to underpin all the categories. Yet how students understood this idea varied across the categories - as such, the notion of ‘information’ had dimensional characteristics. Table 5.1 above provides a summary of the variation across the outcome space of the meaning of information.

In A: Feedback as telling information tended to be seen as a solid, fixed and stable object, able only to be interpreted in one ‘correct’ way, illustrated by the students’ desire for “the right answer” (Tracy). In B: Feedback as guiding information also remained fairly solid and fixed and interpreted in one ‘correct’
way. However, confirmation of the information was sometimes sought from other sources. This included a source being the student themselves. As Nettie said “well there’s always some sort of feedback and if there’s not a lab demonstrator in anatomy and musculo[skeletal] then there’s always the feeling of whether I’m doing it right”.

The view of information seemed to soften somewhat in C: Feedback as developing understanding. Information was firm but not fixed, and could be organised into something that could enable understanding, for example by “critical analysis of information” (Ewan). In D: Feedback as opening up a different perspective information appeared to be neither solid nor fixed; instead it could be manipulated to be looked at from different angles, and even be questioned: “in physio a lot of things aren’t proven” (Karl) and because of this Karl tended to “question things a lot”. Variation in the meaning of information across the categories seemed to influence the kind of information that students focussed on when thinking about feedback. Elaboration on this observation can be found in the following section on ‘content focus’.
The content focus

Table 5.2: Summary of the dimensional variation in the ‘content focus’

<table>
<thead>
<tr>
<th>The ‘content focus’</th>
<th>A: Feedback as telling</th>
<th>B: Feedback as guiding</th>
<th>C: Feedback as developing understanding</th>
<th>D: Feedback as opening up a different perspective</th>
</tr>
</thead>
<tbody>
<tr>
<td>Factual information on marks, ‘correct’ answer, ‘correct’ way of doing something</td>
<td>Factual information as per A; evaluative information on task performance and potential improvement</td>
<td>Factual information from assessment; explanatory information for understanding and improvement</td>
<td>Information that shows or explains alternative ways of viewing a situation; does not have to be ‘right answer’</td>
<td></td>
</tr>
</tbody>
</table>

Table 5.2 above presents a summary of the variation across the outcome space of the dimension labelled ‘content focus’. This dimension represents the range of information to which students attended across the categories; in other words it illustrates the kind of content that was in focus in each category. Variation in this dimension was found in the number of focal points and range attended to – increasingly more and of a broader range as the categories of description increased in complexity. For instance, the main focus in A: Feedback as telling was on factual information about the mark or grade achieved, the ‘correct’ answer to questions or the ‘right’ way to do something. Factual information was also emphasised in B: Feedback as guiding, but there was an increased focus on evaluative information, such as how a task was being performed and sometimes how such
task performance could be improved: “what you’ve done, what you should have done, what you need to do to get to where you want to be” (Tim).

In C: *Feedback as developing understanding* there was a general awareness of factual and evaluative feedback information, but the focus was on explanatory information - information that went beyond the task or situation in order to illustrate a concept to be understood. For example, Ewan knew “there’s a lot of times I’m way off-base, but the explanation of why I’m way off-base makes sense”. In situations like that, he would “look for the logical reason behind the answers” (Ewan). In D: *Feedback as opening up a different perspective*, the manner in which factual, evaluative and explanatory feedback information was focussed on, was exploratory in nature. Information was examined and questioned, and considered in terms of how it illuminated potential alternate views of current and future situations: “with feedback a person can prove to me what’s wrong, to also make it correct next time” (Karl).
A sense of agency

Table 5.3: Summary of the dimensional variation in the ‘agency of feedback’

<table>
<thead>
<tr>
<th>Agency</th>
<th>A: Feedback as telling</th>
<th>B: Feedback as guiding</th>
<th>C: Feedback as developing understanding</th>
<th>D: Feedback as opening up a different perspective</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>External agents only, emphasis on ‘expert’ source; peer input has reduced impact as not ‘experts’</td>
<td>Mainly external agents; usually prioritise ‘expert’ source; some attention paid to peer input; emergence of internal agency - own thoughts, own sense of feel</td>
<td>External and internal agencies – occasional reassurance sought from expert, but less reliance</td>
<td>External and internal agencies – open to all ideas even if not ‘correct’</td>
</tr>
</tbody>
</table>

Authorship of feedback or ‘agency’ comprises another element that crossed categories. A summary of the variation is presented in Table 5.3 above. The term ‘agency’ is used in this study to describe the source attended to by students when discussing feedback. In other words, agency of feedback refers to the place or person from which feedback information originated. The dimension of agency showed variation across the categories in two key attributes: first, there was variation in the location of the agency, with a major distinction in who was responsible for feedback (where feedback comes from) illustrated in the difference between A: Feedback as telling and the other three categories. Second,
there was variation in the degree of acceptance of non-expert sources of feedback.

In A: Feedback as telling, the agent of feedback was located entirely external to the student, for instance the lecturer, tutor, or other perceived ‘expert’ source such as a textbook. In terms of acceptance, feedback that was authored by peers may have been listened to, but tended to be overruled or discarded, seemingly due to their ‘non-expert’ status. For example, Kirsty preferred information from someone “who I think would know” (her emphasis) and would “take that as the right and correct answer”. In the other categories, external agents of feedback were also attended to, however there was an emergence of internal sources of feedback and an increased attendance to feedback from a variety of sources. In B: Feedback as guiding, this emergence of internal agency was evident as students started to reflect on their own thoughts or used their own sense of feel when learning manual therapy techniques. Tim, for example, would first get information on “this is why you went wrong” and then would “sort of almost tell yourself what you need to correct…sort of more what’s required, is how I’m processing it”. ‘Expert’ sources were a preferred external source, but peer input could be utilised especially if the provider was seen as having some knowledge in the area.

The internal agency of kinaesthetic sense, and greater emphasis on thinking and reflecting inwards was evident in C: Feedback as developing understanding, with less reliance on external ‘expert’ confirmation, and more consideration of peer
input and self-reliance, like “figuring things out for yourself” (Ewan). In D: Feedback as opening up a different perspective there was a liberal sense of agency, with receptiveness to all sources or agents of feedback, even if the content proved to be incorrect.

Direction of communication

Table 5.4: Summary of the dimensional variation in the ‘direction of communication’

<table>
<thead>
<tr>
<th>A: Feedback as telling</th>
<th>B: Feedback as guiding</th>
<th>C: Feedback as developing understanding</th>
<th>D: Feedback as opening up a different perspective</th>
</tr>
</thead>
<tbody>
<tr>
<td>The ‘direction of communication’</td>
<td>Unidirectional; transmit</td>
<td>Mainly unidirectional; transmit-receive-occasional response reaction</td>
<td>Multi-directional; comprehension of concepts</td>
</tr>
</tbody>
</table>

This dimension captures the directional nature of the communication that students experienced in feedback. Specifically, this dimension describes the way in which ‘information’ (i.e., feedback) was communicated. The details of this communication journey showed variation across the categories. A summary of the variation is presented in Table 5.4 above. In A: Feedback as telling, there was no
dialogue - communication was instead a unidirectional monologue. For example, for Jason “the experience that I’ve had is like the teacher telling or, yeah, the demonstrator telling us students”. Information was transmitted from the source; whether and how the recipient received and attended to the message was variable. In B: Feedback as guiding information was also transmitted from source to recipient, but there was sometimes a response reaction in terms of students talking about applying feedback in an abstract future scene. Communication remained mainly unidirectional, but there was an occasional sense of bidirectional interaction, illustrated when Belinda talked about “bouncing ideas off each other…giving each other feedback” in a study group situation. In both C: Feedback as developing understanding and D: Feedback as opening up a different perspective, communication was multidirectional - information flowed to, from and between parties. The two categories differed from each other by the way in which students subsequently interacted with the information: for the purpose of understanding concepts, or also with the intention of developing a different point of view.
Temporal application

Table 5.5: Summary of the dimensional variation in temporality

<table>
<thead>
<tr>
<th>Temporality</th>
<th>A: Feedback as telling</th>
<th>B: Feedback as guiding</th>
<th>C: Feedback as developing understanding</th>
<th>D: Feedback as opening up a different perspective</th>
</tr>
</thead>
<tbody>
<tr>
<td>Present emphasis, immediate situation</td>
<td>Mainly present as per A; occasional abstract implication to future</td>
<td>Emphasis on understanding present, plus application to future</td>
<td>Inclusive of past, present and future</td>
<td></td>
</tr>
</tbody>
</table>

Earlier in the introduction to this chapter, reference was made to temporal features in students’ conceptions of feedback. The dimension of ‘temporality’ reflects the way that students talked about the past, present and future when discussing feedback – it represents the application of feedback information upon the continuum of time. Table 5.5 above presents a summary of the variation in temporality across the outcome space.

In A: Feedback as telling the temporal focus was on the here and now, illustrated by use of present tense language, and reference only to the immediate task at hand. The temporal focus remained mainly in the present in B: Feedback as guiding however there was some implication of future application. This tended to be in a vague, abstracted sense such as “turning that [information] into something
that I might need to work on” (Belinda) - in other words, information was not specifically applied and instead a general future use was alluded to.

In C: Feedback as developing understanding the present time was added to with distinct references to the future and how understanding could be applied for improvement of future tasks. The emphasis on future application was evident with Ewan’s remark “I think feedback is pointless if it doesn’t come with ‘here’s how you need to improve’ comments”. In D: Feedback as opening up a different perspective there was a focus on the present and the future as well as a glance back at the past, demonstrated by comparing previous views of a situation with current and potential views: for example, Karl would look at “how I answered it before” and then consider “how would I answer it now”.

Application to situations

Table 5.6: Summary of the dimensional variation in the application to situations

<table>
<thead>
<tr>
<th>Application to situations</th>
<th>A: Feedback as telling</th>
<th>B: Feedback as guiding</th>
<th>C: Feedback as developing understanding</th>
<th>D: Feedback as opening up a different perspective</th>
</tr>
</thead>
<tbody>
<tr>
<td>Immediate relevance, in-class academic world</td>
<td>Relevance to academic world, in-class and studying at home</td>
<td>Relevance across subjects in academic life and also beyond to professional life</td>
<td>Broader scope of academic world and beyond to general learning, view of the world</td>
<td></td>
</tr>
</tbody>
</table>
Summarised in Table 5.6 (previous page), the dimension labelled ‘application to situations’ details the context of the situations in which feedback information was applied. The resulting implication from this dimension reflects how transferable the feedback information was (as a general concept) into other, different situations. There was variation across the categories, as the situations in which feedback information could be applied expanded from a defined, academic-related view to a more global, general world-view. In A: Feedback as telling the parameters were defined by the academic world and the application of feedback was generally for specific, in-class situations. For example, “if you’re in a lab situation where you’re learning a technique and the demonstrator shows you and then you go to your partner and do it” (Tracy). For B: Feedback as guiding the academic world of the classroom situation remained a delimiting focus but there was also an occasional extension of the learning environment, such as when “practicing [techniques] sometimes, a few times just at my house or her house” (Fiona).

In C: Feedback as developing understanding the parameters expanded to move outside of the classroom and into the future professional world. Feedback information in one subject area could be applied to other subjects and also to professional practice: “[in physio] it’s about getting as much information as possible from as many places as possible, trying to put it together to get one big picture” (Tessa). In D: Feedback as opening up a different perspective the parameters extended beyond the academic world and the future professional world to include
a view on learning in “just even daily living” (Karl). Feedback as a different perspective became an integral part of the way one viewed the world.

**Summary of Part One: Dimensional attributes**

As mentioned in the introduction, the data in this section resulted from a meta-analysis of the categories. The dimensional characteristics provide a detailed, holistic view of feedback as seen from the students’ perspective. As well as depicting the dimensions in detail, this section also shows how the dimensions manifested and changed across the categories; for example, the characteristic of ‘agency’ as expressed in *A: Feedback as telling* is generally notably different from the way it is expressed in *D: Feedback as opening up a different perspective*. Each dimensional characteristic tended to be expressed in an increasingly multifaceted manner as the categories themselves became more involved and expansive. In this way, the dimensional attributes show the relationship between the categories, demonstrated in the themes of expanding awareness. This relationship was one of increasing complexity and inclusivity.
Part Two: Students’ responses to feedback

Introduction

In this section data related to students’ responses to feedback information are presented. The term ‘response’ in this study is used broadly to mean the general manner in which students went about engaging with feedback information - the way they interacted with feedback and the ideas that formed a background framework for the interaction. The data in this section were found to differ somewhat from studies on the way in which students ‘approach’ learning situations. As the literature review revealed (Chapter Two) there is an established body of research about how students approach study and learning situations in the manner they do. Students’ approaches in such situations are generally categorised as being either ‘deep’, ‘strategic’ or ‘surface’. What are less frequently reported are studies from the students’ perspective that provide insights into the various factors that influence students’ approaches to study and learning situations.

During the interviews in this study, students identified several different ‘factors’ that tended to influence what they would do in a feedback situation – in other words, factors that had an effect on their approach. These factors appeared to have a significant part to play in framing why students engaged (or not) with feedback. A cross-category analysis of the factors showed variation in the
students’ rationales. This variation suggests a potential relationship between the way in which feedback was conceptualised and what influenced the interaction. For instance, in A: Feedback as telling students’ responses to feedback were ‘conditional’ on their perception of several factors. A summary of the relational interaction adopted by students according to category is presented in Table 5.7:

Table 5.7: Summary of students’ responses to feedback information, by category

<table>
<thead>
<tr>
<th>Category</th>
<th>Conditional on:</th>
<th>Affected by:</th>
<th>Considered with:</th>
<th>Integrated via:</th>
</tr>
</thead>
<tbody>
<tr>
<td>A: Feedback as telling</td>
<td>• Relevance to learner (do I need to know this for assessment)</td>
<td>• Relevance to learner (to assessment or professional practice)</td>
<td>• Relevance to professional practice</td>
<td>• Considering the source</td>
</tr>
<tr>
<td></td>
<td>• Grade achieved</td>
<td>• Grade achieved</td>
<td>• Evaluation of source (aptitude)</td>
<td>• ‘Making sense’</td>
</tr>
<tr>
<td></td>
<td>• Comprehension of feedback</td>
<td>• Interest in content</td>
<td>• ‘Making sense’</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Permanency of grade</td>
<td>• Evaluation of source (approachable, available, level of expertise)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>B: Feedback as guiding</td>
<td>• Relevance to learner (to assessment or professional practice)</td>
<td>• Relevance to professional practice</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Grade achieved</td>
<td>• Evaluation of source</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Interest in content</td>
<td>• ‘Making sense’</td>
<td></td>
<td></td>
</tr>
<tr>
<td>C: Feedback as developing</td>
<td>• Relevance to professional practice</td>
<td>• Evaluation of source</td>
<td></td>
<td></td>
</tr>
<tr>
<td>understanding</td>
<td>• Grade achieved</td>
<td>• ‘Making sense’</td>
<td></td>
<td></td>
</tr>
<tr>
<td>D: Feedback as opening up a</td>
<td>• Relevance to professional practice</td>
<td>• ‘Making sense’</td>
<td></td>
<td></td>
</tr>
<tr>
<td>different perspective</td>
<td>• Evaluation of source</td>
<td>• ‘Making sense’</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>• ‘Making sense’</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Further elaboration of these ‘influencing factors’ as they manifested in each category is provided in the sections that follow the table. Illustrative cases have been included in the two categories where the data was sufficient to avoid repetition; in the other two categories, illustrative cases have not been utilised.
A: Feedback as telling - a conditional response

Introduction

In this category, how students responded to feedback information followed logically from the meaning of the conception: feedback was telling, and thus responding to feedback involved being told. This entailed the act of listening and the listening was a mostly passive activity. As mentioned previously, there was little evidence that students actively thought about or reflected on feedback. In addition, several factors were identified by students that influenced their engagement in feedback situations and thus their response to feedback was ‘conditional’. These factors are described below.

Do I need to know this?

This factor was about the relevance of feedback information as perceived by the students. The notion of relevance arose in two different ways in this category, both of which were related to the students’ perceived ‘need to know’. First, there was the relevance of the feedback information for assessment or learning requirements. For example, Kirsty explained that:

“if I know I’m not going to need that, to do that again then it’s… well, um, just, like, for example, I know we did that in the communications paper, like, we did assignments with that. But a
lot of that stuff I knew it wasn’t going to be in the exam, I knew it wasn’t... so once I’d read it, it was kind of ‘back of the cupboard’ kind of thing”.

Second, there was the relevance of the subject to professional practice as a physiotherapist. Feedback information of this sort would have attention paid to it because it was “important, because you’re on a professional course, and you want to be able to do things right” (Nina).

What grade score did I get?

Students reported that the grade they received influenced their responses in feedback situations. In this category, a high grade achieved meant students tended to not enter into feedback situations, as getting feedback seemed unnecessary. A high grade was taken as evidence that understanding of a subject had been achieved, for example “it [the grade] kind of reflected that I wasn’t significantly wrong, so I wasn’t too worried” (Neve). This was reiterated by Kathryn: “I probably wouldn’t go to the effort of making an appointment [with a tutor]…if I get 85-90% I sort of don’t have any questions”. In other instances a high grade was viewed as a fragile achievement, something that was perhaps best left untouched, for example “if I get a good mark I don’t want to look into it too much, just accept it, ‘cause, like I said, with my essays I’m quite surprised ‘oh, we won’t go talk about it, I’ll just take it’” (Kathryn, her emphasis).
What do they mean by that?

Not being able to make sense of feedback information tended to be related to the unidirectional nature of communication in this category. There was evidence of students not comprehending feedback and subsequently not responding to feedback:

“assignments that we get given back, they quite often have some comments and things on them. But, yeah, I haven’t found them all that helpful though…because they, sometimes, like, it might say “you need to put this in here” but I don’t really understand what they mean by that, or why it should be there…sometimes the comments made don’t really make much sense so, um, yeah, they’re not much use at all” (Kirsty).

The mark can’t be changed, so there’s no point

Specific to this category and related to grade was the fact that the test/assignment had already been marked and, because the grade could not be changed, there was little point in pursuing feedback. Kirsty did not “really take it much further because, yeah, it’s already been marked, it’s already been done, so there’s not much you can do about it then”. For Kathryn the situation was much the same, in that “I know you can ask for your papers but I’ve never…I think like, you can’t change your mark and that paper’s finished, its gone”.
How approachable is this person?

Another factor influencing students’ responses to feedback in this category was related to the source, as in who or what provided the feedback. The person providing feedback was evaluated in terms of how approachable students perceived them to be, and they needed to be approachable for students to respond. Having “quite a good relationship with [our] tutors” was important, so that one “knew what we could approach them about and how they’d respond to us” (Nina). It was easier to approach the tutor than to approach the lecturer because “it’s a different level…[you] have to be really prepared to ask questions…[in case the lecturers] make you feel bad” (Emma). The difference from the first year experience to the second year experience was noted in this influencing factor, as “this year’s a lot more helpful…they’re [the lecturers] willing to help you, I think” (Kirsty).

How available is feedback?

The perceived availability of feedback information was another factor that influenced students’ responses. The idea of ‘availability’ was manifest in two different ways in this category; first was the issue of having access to teaching staff:

“It's just, I guess, also the tutors and lecturers have made themselves more available. Like, for example, labs last year it was
like “here are your lecturers” and you’d go and it’s just random lab tutors and stuff. But, this year it’s, you guys are there and stuff and you can say “you said this in the lecture, why does it not make sense” now kind of thing. I guess that’s feedback as well, you can jump back onto why that was said and how that relates to the lab, as opposed to sitting there and it’s almost like a completely different class…it’s more integrated this year, it’s helpful” (Neve)

Second was the issue of effort required to access feedback. Because “it was offered and it was [during] the lab time” (Kathryn) little extra effort was required. The feedback situation “was there for me, all I had to do was turn up…it was really good, I guess I think I’m too lazy sometimes, and should follow things up more…you’ve got to be quite motivated about getting it sometimes, if it’s not set out for you” (Neve). It seemed that if feedback was perceived as being easy to access, this could encourage students to respond to feedback.

Illustrative mini-case A

Within A: Feedback as telling, Kathryn provided evidence of someone who emphasised various ‘conditions’ under which she would engage or respond to feedback. Some of these ‘conditions’ were linked to the mark achieved. For example, if Kathryn got a low mark there was the opportunity to ask “why did I
get marked down?” but she had never done that due to being “quite happy” with her mark. In fact, she “didn’t think [she’d] get that good, so didn’t want to ask, just be happy with it”. In other summative assessment, whilst knowing that “you can ask for your papers” to look at, Kathryn had never done that either because “it sort of seems like too much hassle” adding that “well, you can’t change your mark, and that paper’s finished, it’s gone”. In a potentially more formative assessment situation, for example following an assignment, Kathryn would “read the comments and sort of take it in” but would then think “I’m not going to be writing the same essay again next term”, thus immediately reducing any transferability of the feedback.

In addition to mark achieved, perceived relevance was another ‘condition’ that Kathryn emphasised when talking about responding to feedback. In her studying, “for some of our subjects, we don’t see how they’re related” for example “a lot of physiology, like, some of it is but a lot of it isn’t, and also a paper last semester on behavioural foundations”. Kathryn did not “see them as important as say, like, anatomy, which is the basis of physio and you have to know that” and, as a result, she “wouldn’t have been bothered about asking any questions”. In contrast, she saw “anatomy or musculoskeletal” as relevant because “well, I’ll be doing them through like the whole time” and thus figured “they’re important to really know” (her emphasis). Kathryn was frank in her assessment of her responses to feedback, noting she usually “won’t go to any extra effort to get feedback unless it’s offered in my normal lecture time”. However, she did make
an effort for anatomy because “I think it’s important” and also “because I’m not
doing as well as my other papers and I want to get my marks up”.

B: Feedback as guiding - an affected response

Introduction

The manner of students’ responses to feedback information in B: Feedback as
getting guidance was aligned with ‘being guided’. Listening and observing were
important elements of the response. In addition, there was evidence that students
were starting to think about what had been said. The emergence of self as a
source of feedback was reflected in students’ responses: attention was now paid
to internal and external sources of feedback, and thus students had to determine
the relative merit of such feedback sources. Several factors appeared to influence
students’ responses to feedback; as such their response to feedback was ‘affected’
by these factors. Some of these factors seemed similar to those identified
previously; however, these were given a different emphasis or meaning specific to
this category.
A varied reaction to grade

The grade achieved in a subject was found to have a variable influence on students’ responses to feedback. Achievement of a high grade sometimes meant that getting feedback information was not a priority. Not because there were no questions to ask, as in the previous category, but because a high grade was satisfying in terms of performance, and the satisfaction led students away from responding: “if you get a fairly decent mark you tend to not really bother [with feedback]” (Nettie) particularly as students were “happy with the marks” (Bekah). Achieving an acceptable grade sometimes outweighed the perceived effort required to seek feedback. For instance, Tim did not “know how driven” he would be, whereas Celia was clearer: “I can't be bothered, if I do ok”. Even if feedback information was obtained or provided students might not “always take it on board, because I’ve got enough [marks] in my assignments” (Deborah).

However, for some students the grade achieved did not influence whether they subsequently sought feedback. For example, Derek stated he “would go anyway” to any feedback situations that were offered. Brenda would too, because “even if I’ve done the test and I’ve done really well at it, I still [want] feedback on the answers that I gave”. David would seek feedback because he wanted to find out “where did I do right, where did I do wrong”.

Overall, according to Maya, it “depends on how I did, for example in a test or something, if I felt I did pretty well then I wouldn’t really pursue the feedback”. A proviso to this from Bekah was that “if a mark is significantly lower
than what I expected it to be…then I would probably go and say ‘why did you mark me like this?’ you know”. Tracy reiterated the link between grade achievement and responding to feedback:

“I think it depends on how well you’ve done, because if you’ve passed and you’re happy with what you’ve got, then it doesn’t really, it’s not, I wouldn’t really worry about it at all”.

Do I think this person knows what they’re talking about?

In the data contributing to this category was evidence that students responded to feedback based on their judgement about the source. Evaluating the source of the feedback was an evaluation of expertise, where feedback was considered to be best from “an expert” (Maya). This expert was “someone who knows what they are talking about” (Nadia) or “people who would know the answer” (Belinda), for example “the teacher who knows more” (Tim). By “ask[ing] the lecturer…[there was] nothing like getting feedback from someone who actually knows what they are talking about” (Celia). Feedback “from the tutor is the one that I most take on board…the feedback I most value, I guess you could say” (Nadia). In one interesting variation on the theme of evaluating the source, the judgement was not about expertise but related instead to personal world-view:

“[it] probably depend on the person who gives it…if it was someone who was, like, really important to me then, yeah, I’d probably accept it and think about it… I’m a Christian, right, and
some people, like, OK, some, when some people give feedback it might be contrary to what I believe in, so it doesn’t matter what that person says, or who that person is, I probably won’t take it” (Maya)

Am I interested in this subject?

Being interested in a subject also had an influence on students’ responses to feedback in B: Feedback as guiding. Brenda was “more interested in what I’m doing at the moment, so, I want to improve on whatever I can, and just take every opportunity” and the result of being interested meant one would “put more effort into it [the subject]” (Maya). Being interested in a subject and finding a subject enjoyable were intimately related, and this was reflected in students’ responses to feedback:

“I found feedback good this year… I want to know, like, if we get options for feedback, especially for anatomy, then I’ll go, I enjoy going through papers” (Bekah).
Is this important for my future?

The influence of ‘relevance’ on students’ responses to feedback was singularly related to the perceived value of the feedback on future professional physiotherapy practice. Rather than being about ‘the need to know’ for tests and exams, the emphasis in this category was on ‘this is important for my future’. If a subject was considered to be “a waste of time” for future practice (Nadia) then a response to feedback was not initiated. Conversely, if a subject was considered to be “more relevant this year to the course, like, to my degree” (Britt) then one became “motivated to seek feedback now because [I’m] trying to be the best [physio] I possibly can” (Celia). Tracy was clear in her reasoning: “I just see that in my job one day, when someone comes to me with something, I don’t want to have to feel like I don’t know it, just because I didn’t follow up on the test and the marks that I did get” (Tracy).

How will their attitude affect my experience?

The influence of ‘approachability of source’ arose in this category, in a similar fashion to the previous category. Students noted their perception of how approachable a person was, and the experience could be a positive or negative one. In a positive experience, the person being asked for feedback was “quite approachable and very helpful” (Nadia) and the students had “no qualms about doing it” (Bekah) because “I guess I felt I could ask” (Nadia, her emphasis). A few
negative experiences led to one student in particular being strongly influenced by this factor:

“it depends on who’s taking that subject as well, whether I can approach them and if I think they will be interested to give the feedback…there are a certain type of people that I wouldn’t [approach] ‘cause I’ve got that kind of vibe from them that they’re not interested… I always feel that I’m being a pain and going behind people and trying to get the information…if a person doesn’t seem very interested in feedback then I probably won’t go…it just depends, but there are some people that I’d never approach” (Brenda).

Is feedback available?

The influence of students’ perceptions on the availability of feedback was reflected in two ways in B: Feedback as guiding. The first meaning was also found in the previous category: the availability of feedback, in terms of ease versus effort and the perception that to obtain feedback a “very very big effort” (Nettie, her emphasis) was required. The second interpretation of availability was related to the actual process of obtaining it, a belief that “maybe we can’t get it” (Emma). This was due to not knowing how the ‘system’ worked: “I actually don’t know how it works in uni, like, why we can’t get the paper back and take a look at
it” (Emma). Deborah “just didn’t really know how to go about it, I don’t know if I have access”. There was a general lack of awareness about how to go about getting feedback: “it’s not mentioned that we’re actually even able to do that, you kind of just don’t think it is available” (Belinda). Fiona reiterated this: “I don’t think about feedback as being so available, I suppose”.

Illustrative mini-case B

In terms of responding to feedback, Donna expressed some of the factors that tended to influence and form this part of B: Feedback as guiding. For example, there was evidence that students evaluated the source of the feedback and this evaluation formed part of their interaction. Donna would “tend to listen to the tutor most because they’re meant to know what they’re doing”. When comparing feedback information from peers and tutors “you’re definitely going to listen to your tutor because you don’t expect your friends to know that much at all, better than the tutor”. Sometimes Donna did not want “to be lead astray” by her peers so did not listen to them, preferring instead to stick to the person who “should know”, such as the tutor or demonstrator. Her responses to feedback were also influenced by the grade she had achieved in the subject, in that if Donna “got quite a good mark” she tended not to be “that active in actually going and sorting it out” if she got something wrong. The availability of the feedback and the approachability of the person were factors too. For instance, Donna noted that
“it depends on how easy they make it for you, like, Steph [the tutor] said ‘come and talk to me if you want to’ but physiology hasn’t, I’m not even sure if we are able to”. Donna concluded with the comment “if they open up the idea to you it makes it easier”.

The relevance of the feedback on the students’ responses to feedback was evidenced in Donna noting that “just getting assignments back, sometimes people put feedback on your essays and things”. When asked what these comments were, Donna laughingly admitted “I don’t know if I actually read them that well”. In Donna’s view, “the essays we’ve done this year I feel are really stupid, in a way, like some of them just seem kind of pointless”. It felt “a bit like school, rather than they’re assessing the content, they’re assessing the way we’ve set it out and all that kind of thing”. Donna found “the anatomy and physiology kind of more stimulating because you feel like you’re actually learning things for what you’re going to be doing”. She noted that, with these subjects, she would “pay more attention” and “try a bit harder than with some of the [other] essays”. Personal specificity of feedback was another relevance factor for Donna. She wanted advice about “what I got wrong, so I can get it right in the end of year” exams. In this regard, information that was about “your test, your marks” was preferred because “you get more attention on you and it’s about your learning” (Donna’s emphases).
C: Feedback as developing understanding - a considered response

Introduction

Students’ responses to feedback information in this category were ‘considered’. This consideration of feedback responses involved the acts of listening, observing, discussing, contemplating and applying. The purpose of these actions was to utilise external and internal feedback in order to obtain understanding. There were three factors related to students’ responses to, and subsequent use of, feedback in this category; these factors are detailed below.

How is this going to help my future practice?

In C: Feedback as developing understanding the factor of feedback ‘relevance’ arose again, however in a manner that had a different meaning to previous categories. In this category the emphasis on questioning the relevance of feedback was driven by students’ desire to gain an understanding for future application. Responding to feedback information from assessments was influenced by “how worthwhile you think the assessment is” (Lisa). Thus responding to feedback from assessments was likely to occur “if you see the relevance of the thing you have learnt or that you’re going to do in the future” (Lisa). In terms of her responses, Michelle considered that she was “active overall and then for some subjects more than others”, also implying an emphasis on the perceived relevance.
of a certain subject. An example was “the physiology paper, where we mostly have lectures, well we do have some labs” but Michelle “didn’t put that much value on those labs” compared to labs in other courses “because they weren’t as relevant”.

In contrast, responding to feedback information from learning situations was considered more important because “especially with physio now that we’re really getting into stuff that we need to know for our career” (Tessa). Perceived relevance of feedback to professional practice was emphasised “because for Physio we’re actually learning a profession that we’re going to go out and we’re going to do that job” (Michelle). Engaging with feedback information in order to gain an understanding had professional implications, because “if you don’t understand why you’re doing something there’s no point being a physio” (Ewan). One student expressed the link between the relevance of subject feedback and gaining understanding for their professional future explicitly:

“I mean, for some subjects you feel like you just want the feedback to be able to get a good mark and for other subjects you feel like you want feedback so that you understand and get a good mark. Like, more the understanding is more important. I think this year, mostly for understanding I care more than the mark…probably because it’s Physiotherapy and I know that, well, because I love it, because it’s going to be a career and I’m definitely going to use whatever I learn.” (Lisa, her emphasis)
Who is providing feedback?

In contrast to previous categories, evaluating the source of feedback was not necessarily a matter of preferring ‘expert’ over ‘non-expert’ in C: Feedback as developing understanding. The emphasis instead was on utilising whatever feedback was available so that concepts could be understood; there was evidence that evaluation was based on a person’s ability to communicate, not on their expertise of knowledge. For example, whilst Michelle acknowledged that “in a test situation I quite like to know what the exact answer is” and for this the preferred source was “the teachers”, she also acknowledged that friends could be helpful with “feedback in my learning…when I’m trying to understand concepts” (Michelle). For Ewan, to “weigh up who’s giving it [the feedback]” was influential on his response to that feedback information because:

“a lot of the stuff we do is all technique and, um, you know, some people are just not as fluent with certain techniques. And so if they’re giving you feedback that doesn’t quite sound right I'll go and get it from somebody who is better suited to giving the feedback” (Ewan).

Does the feedback make sense to my current understanding?

Comprehension of feedback information arose in this category as a factor that triggered a response in feedback situations. Rather than being about
comprehending the mechanics of the message (as in A: Feedback as being told), the emphasis in this category was on integrating the feedback information into what was already understood. Ewan, who mentioned ‘weighing up’ the source of the feedback and finding someone who was ‘better suited’ to giving feedback, linked this to being able to “question the feedback, because for me it has to make sense…so if it seems like it doesn’t make sense or it’s not coherent with what I’ve just read then I’ll ask” (Ewan).

D: Feedback as opening up a different perspective - an integrated response

Introduction

Only two factors were identified in the reasoning framework behind how students’ responded to feedback information in this category. The “why” of the “how” seemed relatively straightforward in this category and made sense in relation to the meaning of the category. The meaning of feedback was seeing things in a different way: any substantial influencing factors might act as barriers to responding to feedback and thus affect the ability to gain a different
perspective. Hence responses were ‘integrated’. As previously, all the quotes used in this section are from Karl’s data, unless specified otherwise.

**Noting the source of feedback**

As with previous categories, the source of the feedback was noted. However the influence of this factor in *D: Feedback as opening up a different perspective* was minor. At times more attention was given to an ‘expert’ source of feedback, for example “if I have a peer student beside me and a tutor, I would often go straight to the tutor”. However, not having access to an ‘expert’ source was not necessarily a negative thing, because “discussing something with your peer, although it could be wrong, it’s also very good to hear what how they thought about that question”. This could lead students to further learning because “sometimes you can actually gain something from what they think”.

**Does the feedback make sense?**

The main factor that influenced students’ responses to feedback information in *D: Feedback as opening up a different perspective* was the requirement that it made sense. If something did not make sense immediately then other avenues were explored until the student was able to see how to make sense of the information and construct meaning:
“I will think whether it makes sense, ‘cause a lot of times I go ‘hmm, no, I still don’t understand, this doesn’t make sense to me’, then I just keep on asking and asking…[if it doesn’t make sense] then that’s when I go to someone else, go to something different, like, check the text book or, yeah, just go to somewhere else that could provide new information or the same information, that would make sense to me”

Thus responding to feedback centred around being able to make sense of the feedback. A lot of the time when Karl was not sure of a question and got an answer he would “strongly doubt it”. The reason for his doubt was because “it doesn’t make sense”. Making sense of information was the first task in a learning process: Karl would ask himself “whether it [the information] makes sense” and a lot of the time would think “no, I still don’t understand, this doesn’t make sense to me”. He would then think about things himself and, if he could not make sense of it, he would “go to someone else, go to something different, like, check the textbook, or just go to somewhere else that could provide new information or the same information in a way that would make sense”.
Summary of Part Two: Students’ responses to feedback

In this section, data regarding students’ responses to feedback have been presented. Across the categories there was variation in both the number and kinds of factors that students perceived influenced their interaction with feedback. In A: Feedback as telling and B: Feedback as guiding, students identified a wide range of factors that affected their responses to feedback. These included elements related to the perceived relevance of the feedback information, a sense of adequacy (and sometimes fragility) of the grade achieved, and an evaluation of the source of feedback. This evaluation of source was one of the factors that distinguished students’ responses to feedback in the two categories. In A: Feedback as telling, despite the reliance on the ‘expert’ as a source of feedback, there was no evidence of an evaluation of that expertise. It seems that perceived ‘expert’ status was enough to satisfy the requirement of possessing ‘expert’ knowledge. In contrast, evaluation of source expertise seemed to have an effect on students’ responses in B: Feedback as guiding. Feedback could be ignored if the perceived expertise was not sufficient. Students’ responses to feedback in A: Feedback as telling were ‘conditional’, in which there were many factors that a response potentially depended on. Responding to feedback seemed to be ‘affected’ in B: Feedback as guiding indicating an overall slightly less provisional, slightly more open manner of engagement. In C: Feedback as developing understanding, a few factors were taken into account by students, however much less so than the previous
categories. There was an emphasis on relevance of feedback information to future practice and the perceived aptitude of sources of feedback, and information was contemplated in terms of it making sense. In this way, students’ responses to feedback were a ‘considered’ act. For *D: Feedback as opening up a different perspective* there were even fewer factors identified; the main factor affecting responses was students being able to make sense of feedback information. With so few conditions or obstacles to shape or guide the experience, it seemed that students’ responses to feedback in this category were ‘integrated’.

These results associated with how students responded to feedback address the second research question ‘how do undergraduate students respond to feedback?’ as well as the third research question ‘what are the influences on students’ responses?’ These results also address the final research question, suggesting the existence of a relationship between *conceptions* of feedback and *responses* to feedback. This relationship was inverted in nature; a (relatively) uncomplicated conception of feedback was associated with a multifarious collection of influences on students’ responses, whereas the more inclusive view of feedback was associated with minimal barriers to engagement.
Part Three: Individual and cross-category summation

Introduction

A global précis of the individual categories of description, the internal relations within each category, students’ responses to feedback and the cross-category relationships constitute the final part of this chapter.

A: Feedback as telling - solidity, passivity and absence

There was close alignment in this category to the global and predominantly tacit notion that the term ‘feedback’ was synonymous with the term ‘information’; many students used the two words as interchangeable units. The structural components of the category were all internally related to the referential aspect or central meaning of the category – that feedback was about telling, transmitting, being told. The overall impression of the category was one of solidity. For example, information was viewed as something constant, fixed and not open to interpretation or adaptation; the facts were the facts and one could be either right or wrong. This solid view of information and knowledge suggested that information could be packaged into a ‘message’ to be transmitted. There was
minimal discussion of information, and thus minimal flexibility in looking at differences in – or different views of - knowledge. In addition, the source or agency of feedback was narrowly defined to ‘experts’; in general, there was little room in this category for feedback coming from sources perceived to be ‘non-expert’, such as inexperienced peers or patients on the receiving end of techniques. There was a strong temporal orientation to the present; future application of feedback was not emphasised. There was little evidence that students were thinking about or reflecting on feedback and the impression was of passivity and awaiting direction. This passivity was related back to the referential aspect of the category – feedback was telling, and telling was to be told: an inherently passive activity. Alongside the sense of rigidity was also a sense of absence, in terms of absence of complexity in the structure of the category. For example, there was no indication of internal feedback (via an internal, kinaesthetic sense of feel, by visual feedback cues or by reflecting on their own thoughts) and there was an absence in variety of use of feedback. It seemed that in the conceptual basis of this category, most noticeable was what was not present, rather than what was. Conversely, the set of factors that influenced students’ responses to feedback information were numerous in this category.
B: Feedback as guiding - broadening possibilities, emerging activity

The ideas that contributed to this category seem to be tempered slightly, when contrasted with the ideas from the previous category. For example, when asked ‘what is feedback’, the most common answer was ‘comments from someone’ or ‘guidance’ – feedback was not the direct telling of the correct answer, the mark or what needed to be known. The view of information remained fairly firm, such that knowledge was generally not questioned. However, the tempering was seen as a shift in what kind of information was in focus; rather than an importance on merely what was right or wrong, there was an additional focus on performance information, such as how to do something and how to improve. Thus there was a temporal orientation towards the future in this category. A variety of sources were consulted to provide and check information and knowledge, with a resultant broader range of possible origins of feedback. There was a lessening of reliance on an external ‘expert’ as the agent of feedback and a cautious opening to the idea that peers were a source of feedback information. At the same time, there was a complementary emergence of feedback arising from internal sources. For example, it was in this category that the first mention of an internal kinaesthetic sense of feedback was evident, as well as students commenting on thinking about or reflecting on feedback. Reflecting on feedback and returning to a task introduced an element of circularity to the internal structure of the category. It also suggested an emergent ‘activeness’ on the part of the student; it seemed that
students were starting to engage more in learning. The implication of this was potentially more active participation in feedback processes and this was suggested in the slightly reduced number of influencing factors as barriers to responding to feedback.

C: Feedback as developing understanding - increasing activity and reliance on self

In this category the impression was of an expanded, more active view of feedback and this was reflected in the internal relations of the category. The central referential theme in this category was feedback as information for understanding. The internal relation to structure was seen as students used feedback actively to make sense of concepts and gain greater understanding, suggestive of a learning cycle. In this regard, students seemed to be actively participating in feedback for their own learning. The temporal orientation to future in this category related to a more active view of feedback; applying feedback to future tasks was a natural extension of activity, as well as of temporality. There was also a structural expansion in the category, as students seemed to adopt a more holistic view of learning and applying knowledge in a broader setting, looking beyond the classroom to their professional lives ahead. Feedback information was accessible from a variety of sources, with a greater reliance on self as an agent of feedback, more utilisation of peers as a source of
feedback and less reliance on perceived ‘experts’. The students in this category, with their potentially more developed conception of feedback overall, seemed to discern feedback for learning purposes (for example, what do I understand from this?) from feedback in assessment (for example, the mark or the right answer). However the focus remained on gaining understanding. There were limited factors identified as influencing students’ responses to feedback in this category, an indication of the overall increased reliance on self.

D: Feedback as opening up a different perspective - inclusivity and curiosity

The impression in this category was one of expansiveness and inclusivity, as well as curiosity. The relationship between category meaning and structure was integrated. The general, global meaning or referential aspect of the category was a view of feedback as information that could illuminate alternate points of view. Structurally, this perspective was gained by looking at situations differently and learning from these different views. Information did not necessarily need to be ‘correct’; alternate ways of thinking could be highlighted instead, revealing an inclusive view of information. Inclusivity was also reflected in the variety of sources of feedback accessed in this category. Further inclusiveness was reflected in the way that the idea of feedback as ‘the answer’ was integrated into the broader conception of feedback as seeing things differently. Information, in the
form of knowledge, answers and feedback was able to be questioned – this meant that information was open to interpretation and critique, in order for it to make sense. A different perspective on a situation could be applied to previous and current understandings, and also to future tasks. This conceptualisation of feedback was related closely to the act of learning, an act in which the student was critically engaged. The notions of inclusivity and curiosity linked to the way interaction with feedback occurred in this category. There were minimal factors identified as barriers to responding to feedback.

Relating the categories of description

An increasing inclusiveness, or expansion, of the conception best represented the relationship between the categories of description identified in this study. The four different ways of conceptualising feedback were related to each other by their shared, overall, tacit view of feedback as ‘information’. This idea of ‘feedback as information’ was a common thread linking the four conceptions. However, it was variation in elements such as how information was seen, what was done with feedback information and the way in which students responded to feedback information that simultaneously connected and differentiated the conceptions to and from each other. The way that this research complements as well as provides a unique contribution to the existing literature is explored in the following discussion chapter.
Chapter Six
Contributions and discussions
Chapter Outline

In this chapter I discuss the results of the study and highlight how it contributes to the existing literature. The research questions are reiterated and responses to the questions are suggested from the results. In the first part of the chapter, I review previous assumptions in the literature on feedback and argue for a more holistic view of feedback. I then situate the findings in the broader field of experiential literature and make connections between this study and other research. Aspects of variation in the categories of description are then discussed, with reference to an emergent reconceptualisation of feedback. I make a case for the existence of a relationship between students’ conceptions of feedback and their responses to feedback. Finally, I examine the context of this relationship with a focus on engagement and self-regulation of learning, and tender some concluding comments.
Introduction

Four related questions are at the heart of this study: what are undergraduate students’ conceptions of feedback? How do undergraduate students respond to feedback? What are the influences that affect their responses? And, what is the relationship between students’ conceptions of, and responses to, feedback? In addressing these questions, a phenomenographic research approach was adopted. This involves identifying and describing students’ conceptions of feedback: that is, ‘what’ students conceptualise feedback as and ‘how’ students conceptualise feedback, as well as the variation in the underlying meanings or ways of thinking about feedback. In addressing the first research question, the data obtained and analysed suggest that students in this study conceptualise feedback in four qualitatively different ways. The categories of description that characterise these differing conceptions have been designated as A: Feedback as telling, B: Feedback as guiding, C: Feedback as developing understanding and D: Feedback as opening up a different perspective. These categories of description represent the ‘outcome space’ for the research. The second and third research questions, regarding students’ responses to feedback, are addressed by way of the many different, significant influencing factors identified by students that stand as potential barriers to their responses to feedback. The observed relationship between students’ conceptions of, and responses to, feedback addresses the final research question: the more complex and inclusive the conception, the less numerous and concrete the influencing factors, which tends to result in less restricted, more open responses to feedback.
Questioning assumptions and broadening views

By identifying students’ perspectives of the meaning of feedback, a major contribution of this study is that it critically evaluates the assumption that a shared understanding of feedback exists. Also, by delving below the surface and looking deeper at the ways in which students experience feedback, this study takes a broader look at feedback. The results from this study reveal a view of feedback that is increasingly holistic and connected to the students’ context. In the literature review, I noted that much of the research on feedback in the higher education environment has been written from within the context of assessment (e.g., Brookhart, 2001; Crisp, 2007; Gibbs & Simpson, 2004). When the emphasis in the research has been on feedback processes, it is often the perspective of teaching staff that has been sought (e.g., Carless, 2002; Falchikov, 1995; Greer, 2001; Mutch, 2003). Of those studies that seek to obtain students’ perspectives (e.g., Brown, 2007; Hendry et al., 2011; Lizzio & Wilson, 2008; Poulos & Mahoney, 2007) feedback is treated pragmatically. For instance, there is an emphasis on researching mechanistic aspects of feedback such as timing, the mode of delivery, use of and effectiveness of feedback. The findings from these other studies illuminate and inform feedback practice but they do so in a way that does not connect these various aspects to the students’ context. These studies also continue the unquestioned assumption of a shared understanding of what feedback actually is. The underlying meanings or conceptions of feedback, from the students’ perspective, have not been substantially investigated, until now.
Uncovering how students conceptualise and experience feedback is an important step towards being able to meaningfully engage with students and feedback.

Students in this study conceptualise feedback as ‘information’. As noted in chapters Four and Five, this ‘superordinate’ notion is sometimes explicitly referred to, and sometimes implicit. Either way, the results from this study indicate that students’ general idea of feedback is as information. Several definitions of feedback have been utilised in previous research. For example, Ramaprasad (1983) defines feedback as “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” (p. 4). Butler and Winne (1995) describe feedback as “information with which a learner can confirm, add to, overwrite, tune or restructure information in memory” (p. 275). Hattie and Timperley (2007) use a definition of feedback as “information provided by an agent (e.g., teacher, peer, book, parent, self, experience) regarding aspects of one’s performance or understanding” (p. 81). A core component of these definitions are that they also depict a view of feedback as information. Thus, findings from this study indicate that a view of feedback as information is in broad alignment with students’ perspectives in this context. Therefore, the tacit assumption made by many researchers of a common idea of feedback as information seems to be not an unreasonable assumption to make. However, it is how feedback as information is conceptualised by students that varies; as such, students in this study show that feedback is more than just ‘information for altering a gap’ (as per Ramaprasad, 1983).
Situating the findings in the experiential literature

In addition to addressing assumptions of a common idea of feedback, this study also contributes to and complements the existing body of literature on experiences of learning and teaching in higher education. Many aspects of this experience have been investigated; an overview of findings from selected research conducted in this area is presented in Table 6.1 (overleaf). In the first part of the table, the focus is on research into phenomena that can be considered as internal experiences, where the phenomena in question arise from within. Studies into conceptions of learning (Marton et al., 1993; Prosser et al., 1994; Säljö, 1979a) are presented along with research looking at epistemic beliefs about knowledge (Dahlgren & Pramling, 1985; Perry, 1970) and the nature of understanding (Entwistle & Entwistle, 1991). In the second part of the table, the focus is on research into phenomena that are, in broad terms, experiences that are external: studies on conceptions of teaching (Gow & Kember, 1993; Kember, 1997; Pratt, 1992; Prosser et al., 1994; Samuelowicz & Bain, 2001) are grouped with research looking at orientations to assessment (Samuelowicz & Bain, 2002). The findings of each study are presented horizontally; in this way the descriptions within a single study can be seen to expand from a narrowly defined and delimited experience to a broader, more inclusive one. Thus presented, the findings in Table 6.1 can be compared to the results of the current study.
Identifying a possible pattern

When considering each study in Table 6.1 (previous) individually and then also the various studies as a related group, a pattern is evident: there is variation from a relatively simple conception or experience, to an increasingly multifaceted experiential form. There is an expanding inclusivity and complexity in the ways that people describe their experiences of various phenomena. The different forms or ways of experiencing a given phenomenon occupy well-established positions within a continuum of experience (Kember, 1997; Samuelowicz & Bain, 1992), a continuum that stretches from a relatively unsophisticated to a relatively sophisticated conceptualisation. Although the descriptive categories of these other studies are not positioned in the table in vertical relation to each other (cf. for example Kember, 1997, p. 260) the categories that are aligned to the left, centre or right in the table do occupy approximately related positions on a spectrum. The nature of the findings in these other studies shifts from the transmission of solid factual information, to the development of alternate views that involves a knowledge-shaping process. The results from this study into students’ conceptions of feedback are placed at the end of the table. Thus Table 6.1 can be viewed in its entirety and the findings from this study are seen to fit into an existent, identified and repeated pattern. In light of this, significant parallels can be drawn between the results from this study to the findings in the other experiential literature, as discussed in the following pages.
Relating to findings from other experiential research

In *A: Feedback as telling* there is a strong focus on the notion of unidirectional information transmission: feedback is information that is *told* to the student. The transmission aspect of the category mirrors results from research into conceptions of teaching: teaching is seen as ‘delivering content’ (Pratt, 1992), ‘knowledge transmission’ (Gow & Kember, 1993), ‘transmitting concepts’ or ‘transmitting teacher’s knowledge’ (Prosser et al., 1994) and ‘imparting information’ or ‘transmitting structured knowledge’ (Samelowicz & Bain, 2001). Reflecting this, learning is most likely to be aligned with ‘increasing knowledge’ (Marton et al., 1993; Säljö, 1979a) or ‘accumulating information’ (Prosser et al., 1994). The reliance on information from an ‘expert’ – usually the lecturer – in *A: Feedback as telling* can be related to Kember’s ‘teacher centered’ conception of teaching, in which knowledge and expertise are considered to be held close to the teacher (Kember, 1997). The meaning of information in *A: Feedback as telling* is fixed, solid and is interpreted in one ‘correct’ way. In addition, the students’ focus is on being told what is right/wrong. Both of these elements link strongly to the dualistic view of knowledge illustrated in Position One as determined by Perry (1970).

There is a focus in *B: Feedback as guiding* on ‘being pointed in the right direction’. This parallels the idea of teaching as ‘helping students acquire concepts and knowledge’ (Prosser et al., 1994) and the corresponding view of
learning as ‘acquiring concepts’ (also Prosser et al., 1994). The very nature of the words ‘helping’ and ‘acquire’ indicate a slightly less directive discourse, apparent in B: Feedback as guiding by the students’ emphasis not on being told an answer, but on being guided towards finding out an answer. The view of knowledge in B: Feedback as guiding remains fairly rigid, perhaps aligning with the dualist view of knowledge at Position Two in Perry’s (1970) work. However the notion of knowledge develops a temporal aspect in B: Feedback as guiding, in terms of students applying feedback knowledge for future situations. This temporal feature seems to relate to the idea of knowledge being ‘sequential’ in nature, as identified by Dahlgren and Pramling (1985). Applying feedback for future situations in B: Feedback as guiding relates strongly to conceptions of learning as ‘applying’ (Marton et al., 1993) and as ‘utilising facts and procedures in practice’ (Säljö, 1979a). Links can also be found to the notion of understanding as ‘reproducing a logical framework’ and to understanding as ‘using own structure’ (Entwistle & Entwistle, 1991), both of which imply an application-based element to the experience of B: Feedback as guiding.

The category of description C: Feedback as developing understanding can be positioned alongside conceptions of learning as ‘the abstraction of meaning’ (Säljö, 1979a), as ‘understanding’ (Marton et al., 1993) and also as Pratt’s (1992) developmental conception of teaching as ‘cultivating the intellect’. These conceptions all imply a sense of activity, in terms of a requirement to undertake and achieve a shift in comprehension from a position of not understanding, to a
position of understanding. This active shift in comprehension is reflected in the conception of teaching as ‘learning facilitation’ (Gow & Kember, 1993) and as ‘negotiating understanding’ (Samuelowicz & Bain, 2001). To facilitate learning or negotiate understanding requires the involvement of participants, and this is seen in the more active engagement of students in learning processes in C: Feedback as developing understanding. The meaning of information in this category remains firm but is not fixed, suggesting that knowledge can perhaps be viewed as relative rather than dualist, as echoed in Position 5 and 6 in the work of Perry (1970).

The focus in C: Feedback as developing understanding is on explanatory information for adaptation and for subsequent task improvement. The idea of utilising feedback information to alter and improve is reflected in the idea of assessment as ‘adapting structured knowledge’ (Samuelowicz & Bain, 2002) and of understanding as ‘adjusting structures’ (Entwistle & Entwistle, 1991).

In D: Feedback as opening up a different perspective there is a view that knowledge is relative rather than dualistic in nature, for it is this relativism that denotes the very meaning of the category; namely, it is possible that there is more than one way of looking at a situation and that feedback is a tool to help facilitate different views. In this way, the idea of knowledge in this category lines up with Position 6 in Perry’s research where relativism is accepted (Perry, 1970). There are also parallels to the idea of knowledge as ‘knowledge about reality’ (Dahlgren & Pramling, 1985), for reality is based in perspective, and perspectives can vary. Presented with variations in perspective, the onus in D: Feedback as opening up a
different perspective is on the students themselves to come to a point of comprehension. This position is reflected in research on understanding, where a form of understanding as ‘developing an individual conception of the discipline’ (Entwistle & Entwistle, 1991) has been identified. The category D: Feedback as opening up a different perspective has strong links to a conception of learning as ‘seeing something in a different way’ (Marton et al., 1993) which also requires students to engage in learning as an ‘interpretative process aimed at the understanding of reality’ (Säljö, 1979a). The category D: Feedback as opening up a different perspective also aligns with a ‘student-centered, learning oriented’ view of teaching (Kember, 1997), in that by obtaining a different perspective on a situation the emphasis is on learning by creating new knowledge, which aligns with a view of teaching as ‘encouraging knowledge creation’ (Samuelowicz & Bain, 2001).

Drawing parallels and filling the experiential gap

By positioning the results of this study into Table 6.1 (previous) it is clear that a pattern of increasing complexity and inclusivity of experience, found in other experiential research, is repeated in the findings of this study. Identifying this pattern in this study has a two-fold significance for these results: first, the parallels seen between this study and other research findings support the positioning of this study within the overall area of experiential research literature in higher
education. Second, the similarity to other well-established experiential research strengthens the credibility and validity of the findings in this study. The findings of this study have a further important role. They can be seen as filling-in part of the picture that is currently missing in the experiential literature: that is, empirical research on conceptions of feedback. In particular, the findings of this study report conceptions of feedback from the students’ perspective. As such, this research situates the students’ experiences of feedback in the related literature and at the same time stands as a significant contribution to understanding in this area.

‘Educationally critical’ variation

A central element of phenomenographic research is the search for variation in the different ways of experiencing a phenomenon. Furthermore, a core epistemological assumption of phenomenography is the existence of a logical relationship between the categories of description in a study (Marton & Booth, 1997). As reported in the results, the relationship between the different ways of conceptualising feedback is expansive and inclusive in nature. The categories of description in this study build on each other, such that the figural elements of one category are subsumed into the next, and so on. However, there is also a change in emphasis as the category contents and boundaries expand. This change is highlighted in the variation between the categories, reflected in the dimensional attributes featured in Tables 5.1-5.6 (Chapter Five). The dimensions from the
table include elements such as the notion of agency, the direction of communication, temporal aspects, and students’ application of feedback. These variations in emphasis can be seen as “educationally critical differences” (Marton & Booth, 1997, p. 111) between the categories, because variation in these dimensions is associated with a shift to new ways of experiencing feedback. Understanding the results from this study in regard to such critical differences is important for making meaningful connections to the arguments arising from the broader literature on feedback, as discussed further below.

Critical differences in agency: implications for peer feedback and sustainability

Results from this study reveal variation in students’ views as to who is responsible for ‘providing’ feedback – in other words, who or what is the source or agent of feedback. The location of the source of feedback shifts across the different categories of description, from a position of singular, external expertise in A: Feedback as telling, to the emergence of an internal sense of agency in B: Feedback as guiding and attending to non-experts in C: Feedback as developing understanding, and then an openness to all sources of feedback as potential points of novel perspectives in D: Feedback as opening up a different perspective. Differences in this structural element of agency have particular relevance when considering the idea of peer feedback and the notion of sustainability in assessment and in feedback.
Many of the students who participated in this study expressed a preference for an ‘expert’ source of feedback, over a ‘non-expert’. This is especially so when the content focus is on information about ‘correct answers’ or ‘how am I doing?’ or ‘what can I do to improve?’. This kind of information is the major focus in A: Feedback as telling and B: Feedback as guiding, which account for most of the data. I acknowledge that, from a methodological perspective, phenomenography is about the range of variation and not the frequency of variation (Marton & Booth, 1997). However, it is still an important point to note that for many students in this study, they prefer to engage in feedback with someone whom they think knows what they are talking about. Additionally, for a few of the students who participated in this study, attending to anything or anyone other than a perceived ‘expert’ seems unlikely. So, with these findings in mind, the question of ‘who should’ be initiating and maintaining feedback with students?” arises.

As reported in the review of the literature, there is an argument arising in the more recent research on feedback that suggests shifting the responsibility of assessment processes, including feedback, into the hands of learners (Boud, 2000; Nicol & Macfarlane-Dick, 2006; Sadler, 2010). Strongly related to this idea of shifting responsibility is the idea of ‘sustainable assessment’ (Boud, 2000) whereby students undertake activities in their learning and assessment that are specifically aimed at developing skills for long-term learning throughout life. Carless et al. (2010) extend the idea of sustainability further, with their suggestion of sustainable feedback, in which students undertake specific learning activities that
require them to monitor their work independently of tutors. This would help develop students’ skills in complex appraisal tasks, for life beyond the tertiary education world (Sadler, 2010). Therefore, moves towards peer- and self-feedback can be seen as a way of empowering learners to take control of their own learning (Nicol & Macfarlane-Dick, 2006), as well as a pragmatic solution to increasing student numbers (Nicol, 2010). Findings from this research indicate that, for peer- or self-feedback initiatives to have an impact with students, actively constructing and negotiating the meaning of feedback – including who or what is the agent for feedback - will be an important part of encouraging and maintaining students’ responses to feedback.

In order to get student buy-in or investment into peer- and self-feedback initiatives, finding ways of enhancing students’ roles in feedback processes (Carless et al., 2010) is a challenge to be faced by all participants in the learning-teaching environment. There are several key ideas that require attention and emphasis. First, students and teaching staff both need to be able to see value in ‘non-expert’ peer feedback. Achieving this will require, amongst other things, a change in emphasis on what constitutes ‘valuable’ feedback content. There are indications at the post-graduate level that the most valuable feedback content is ‘expressive feedback’ in which opinions are shared and reflected upon (Kumar & Stracke, 2007). Encouraging undergraduate students towards generating and expressing their opinions in a peer-to-peer feedback situation, as opposed to focusing solely on factual and ‘correct’ information, would be a step towards
enhancing students’ role in feedback processes, not to mention developing appraisal skills and engaging in critical thinking. Next, both students and teaching staff also need to recognise the unique and perfectly placed position of learners in contributing to peer feedback. The particular perspective on offer from a peer, who is in the same learning context, is likely to contain ideas and insights that are quite different from a teacher’s perspective. Furthermore, there needs to be acknowledgement of and emphasis on the importance of being a ‘producer’ (as well as a receiver) of feedback. The skills learnt in providing feedback are valuable (Sadler, 2010); these skills make a contribution to ‘life-long learning’ (Boud, 2000).

Challenging these ideas may well require concentrated effort on the part of students as well as teaching staff. It will certainly require a conscious and deliberate consideration of feedback processes and practices. However, from this study, there is evidence in the categories of description to suggest that the boundaries regarding agency of feedback may be malleable and possibly open to expansion. Although the preference may be for ‘expert’ sources of feedback, there is some potentially fertile ground for planting the seeds of peer-feedback, and then ultimately self-feedback, initiatives.
Critical differences in communication: feedback as dialogue or as monologue?

Part of the emergent reconceptualisation of feedback noted in the review of the literature includes the idea of feedback moving from a transmission-based monologue to a dialogical interaction (Carless et al., 2010; Nicol 2010; Nicol & Macfarlane-Dick, 2006). Higgins et al. (2001) expand the notion of dialogical interaction further, to encompass a view of feedback as a complex and situated form of communication. How can the findings of this study contribute to this reconceptualisation of feedback? From the cross-category dimension entitled ‘direction of communication’ reported in Chapter Five, there is a distinct view in this study of feedback as a largely unidirectional activity. Many of the students who participated in this study are not seeing feedback as an opportunity for dialogue and discussion. This is in contrast to the findings from Price et al. (2011) who claim that students recognise the need for dialogue in feedback. In the categories of description C: Feedback as developing understanding and D: Feedback as opening up a different perspective communication is multi-directional; gathering, discussing and exchanging ideas is fundamental to these conceptions. In contrast however, in A: Feedback as telling and B: Feedback as guiding there does not seem to be recognition of a need for dialogue to occur. As mentioned earlier, it is these two categories of description that account for most of the data in this study. As such, the emphasis remains on a monologic rather than a dialogic process.
Compounding the challenges of viewing feedback as dialogue, the results from this study also suggest that students’ responses to feedback are influenced by misunderstandings in communication. For example, students’ inability to comprehend feedback comments in *A: Feedback as telling*, plus the fact that comments need to ‘make sense’ in *C: Feedback as developing understanding* and *D: Feedback as opening up a different perspective* suggests that understanding the dialogue in feedback is important for being able to respond to it. These results are supported by the existing literature. For example, attempts by Bloxham and Campbell (2010) to increase feedback dialogue in assessment via ‘interactive cover sheets’ demonstrate the difficulty students had in engaging in dialogue with tutors. The researchers interpret these limitations to dialogue as based on students lacking a full understanding of staff expectations (Bloxham & Campbell, 2010). This is a common theme of argument in the literature regarding dialogue about assessment with students. Some researchers question whether increased assessment dialogue actually ends up confusing students more because students do not understand the assessment criteria (O’Donovan, Price & Rust, 2004, 2008; Rust, Price & O'Donovan, 2003). Other researchers also argue that if feedback is a complex process of communication (rather than just one-way transmission), then how can students understand the discourse? (Boud, 1995; Higgins et al., 2001; Mutch, 2003). In response, Bloxham and Campbell (2010) suggest a need for more effective ways of increasing students’ confidence in feedback dialogues. Part of this undoubtedly involves increased communication on the part of teachers, in order to get their perspective expressed and their tacit expectations...
uncovered. I argue that this needs to be done in a way that encourages dialogue, rather than merely transmitting expectations unidirectionally from teachers to students. There is also scope here for engaging students in negotiating the meaning of feedback criteria. In order for this dialogue to occur, there is a need for teaching staff to create and emphasise conditions for dialogue to flourish. I suggest that one way of doing this is to embed feedback processes, including discussion about these processes, into the curriculum. In this way feedback can become integrated into, rather than an ad-hoc postscript to, the learning and teaching environment. Another suggestion comes from Hattie (2009), who argues the importance of learning climates that “allow for learning from mistakes…that develop the courage to err” (p. 178). In a learning environment where mistakes can be made and feedback about those mistakes can be discussed, the emphasis is two-fold: in addition to highlighting a connection between feedback and learning, students are also able to participate in dialogue about their current, and future, understandings.

From the results of this study, I suggest that effective feedback dialogue needs to be based on first identifying underlying conceptions of feedback. Addressing a view of feedback communication as one-way transmission, such as found in *A: Feedback as telling* highlights the notion that ‘telling’ is not an effective way of communicating and creating meaning (Sadler, 2010). Drawing on Laurillard’s (1979, 2002) conversational framework theory, Nicol (2010) proposes that effective feedback dialogue is based in being adaptive, discursive, interactive
and reflective. An intention to actively reconceptualise feedback as a two-way communicative process has the potential to be a watershed moment in learning and teaching: if feedback is viewed as a process of dialogue and discussion, students’ roles in the active construction of knowledge can be enhanced. A view of students as partners in learning processes, rather than as “receivers of a product” (Price et al., 2011, p. 12) will hopefully have consequences in stimulating and encouraging students’ engagement in learning.

Other critical aspects of variation

Findings from this study reveal further elements of variation in the way that students conceptualise feedback. For example, the temporal dimension of feedback varies from a focus on immediacy in A: Feedback as telling to a past-present-future-oriented view in D: Feedback as opening up a different perspective. If students are not conceptualising feedback as information that illuminates future learning, then feedback is not able to answer an important question of “where to next?” (Hattie, 2009, p. 177). Learning, in terms of growth, development and change, is stunted without the feed-forward ability of feedback. Learning is also restricted if students are not able to see the transferability of feedback information. Broadening the boundaries of applying feedback, such as is evident in C: Feedback as developing understanding, means that students are able to take feedback information and apply it beyond the current situation. For the
physiotherapy students in this study in particular, the ability to utilise feedback information and apply it to professional settings has implications on them ‘becoming’ competent health professionals (Anderson, Kang & Foster Page, 2011; Dall’Alba, 2009).

Finally, results from this study also suggest a relationship between students’ epistemological perspectives and their conceptions of feedback. Although the research interview did not specifically address conceptions of knowledge, it seems that in conceptualising A: Feedback as telling the view of knowledge is one of solid, incontestable fact. In comparison, the view of knowledge in D: Feedback as opening up a different perspective is one of construction and interpretation of meaning. How can students’ views of knowledge shift from such a position of rigidity to a more flexible appreciation of the situatedness of knowledge? Recent research from a longitudinal study involving undergraduate biology students at Otago indicates that factors such as changing how knowledge is presented in class, as well as structuring classes to encourage discussion, seem to have an effect on the development of epistemologies (Wass, 2011, personal communication, 11 October 2011). This finding is in agreement with Tolhurst (2007) who found that the way a course is structured can influence students’ epistemologies. Wass (2011) also notes that a shift in epistemological perspective seems to be related to a change in students’ perceptions of control and authority in learning situations (personal communication, 11 October 2011). Perhaps the connection here is that a view of feedback as ‘a different perspective’, for example, where knowledge is
open to construction and interpretation, is reflected in students adopting more ownership or control of their role in learning situations.

**Relations between conceptions and responses**

The results in this study provide empirical research that not only identifies students’ conceptions of feedback, but also indicates a relationship between students’ *conceptions of feedback* and their general manner of responding to feedback. As mentioned earlier, the relationship is an inverted one – that is, the more expansive the conception of feedback, the less numerous the factors that act as potential barriers to responding to feedback. In this way, the findings of this study concur with Säljö (1979b), who found that differences in conceptions affect how people approach and what they manage to get out of a task. The influencing factors identified in this study are seen to form part of the way students approach a feedback situation. Thus there are parallels in this study to Vermunt’s (1998) findings, where ‘approach’ is a more complex experience than the bipolar ‘deep’ versus ‘surface’ terminology of previous research. By revealing the relational nature between students’ conceptions of feedback and their responses to feedback, this study makes a significant contribution to understanding students’ experiences of feedback.
Students’ responses as ‘engagement’

Extending the idea of students’ responses to feedback, the various influencing factors found in this study can be considered as affecting students’ engagement with feedback. As detailed in the literature review, Price et al. (2011) developed a diagram depicting students’ experiences and responses to assessment feedback, with a focus on students’ engagement. In their article, the researchers draw attention to students self-reporting their progressive disengagement in a learning task, based on repeated unsatisfactory experiences of feedback (Price et al., 2011). From their research, the authors note “that engagement may be suspended at any stage” (Price et al., 2011, p. 5). The diagram from their article is reproduced again as Figure 6.1 (below), but this time the results of this study are included as an addition to the picture, indicated by the inserted red line.

![Figure 6.1 Potential barriers to engagement with feedback](Adapted from Price et al., 2011, p. 5)
The red line is a diagrammatic representation of the various influencing factors identified in this study, factors which act as potential barriers to students’ engagement with feedback. The red line can be positioned along the flowchart at any - or many – points, depending on the significance of the influencing factors. For example, results from this study identify ‘relevance’ as one of the factors that influence students’ responses to feedback. Students might not respond to assessment feedback, if they perceive the assessment task as ‘irrelevant’ to their future learning. There is support for this in the literature. For example, McCune (2009) suggests that differences in the perceived value of the subject matter by students, in terms of the subject’s relevance and applicability, affect students’ engagement with feedback. Or, as found in this study, students might collect their feedback but be happy with the grade they have achieved, and this is where responding to feedback ceases in that instance. Therefore the findings from this study show agreement with Bryson and Hand’s (2007) conclusions of a continuum of students’ disengagement to engagement. Results from this study also show agreement with the general findings of Price et al. (2011): there can be suspension of engagement at any point in the feedback process. The resultant effect is that feedback becomes a static ‘product’ rather than a dynamic ‘process’. However, results from this study suggest that a deep-rooted and until now unidentified factor underlies students’ responses to feedback: their conceptions of feedback.
Conceptions, responses and the effect of context

As argued above, the findings in this study suggest a relationship between students’ conceptions or experiences of feedback and their responses to feedback. According to Marton and Booth (1997), “we cannot experience anything without a context” (p. 89). Therefore the way that students conceptualise and respond to feedback cannot be separated from the context in which they experience it. In this study, the various influencing factors and their potential to act as barriers to responding to feedback can be interpreted as students’ perceptions of context. For example, when students perceive the context of a task or subject as ‘not relevant’ they seem less likely to engage or respond to feedback. Similarly, in a context where students perceive the source of the feedback to lack credibility, students seem less likely to engage in the feedback process. Therefore, students’ responses to feedback are related not only to their conceptions of feedback, they are also related to their perception of the context of the feedback situation. This relationship between students’ responses and perception of context is mirrored in research on student learning, in which approaches to learning are found to be a function of the relationship between students and their context (Ramsden, 1987; Trigwell & Prosser, 1991). Findings in this study also suggest that a change in situational context – for example a more relevant learning task – can lead to increased potential for engagement with feedback. In this regard, there are parallels between this study and Biggs’ (1989) 3P model of learning, wherein the context, the task, and the student are inextricably interconnected in a dynamic
system. It is the students’ conceptions of feedback that contribute to the
‘presage’ factors in Biggs’ (1989) model.

What this study shows is that, in addition to “behavioural and attitudinal
aspects” (Bovill et al., 2011, p. 206), the effect of context (Laurillard, 1979, 2002)
and the authenticity of learning tasks (McCune, 2009), students’ engagement and
potential disengagement in feedback also relates to their conceptions of feedback.
This study reveals and emphasises the relations between students’ conceptions of
feedback, their responses to feedback, and their perceptions of context. In doing
so, this study embeds the meaning of feedback within the context of the students’
world, an approach to researching students’ experiences that is advocated by
Ashworth and Greasley (2009). Furthermore, this study reveals a view of
feedback that is truly ‘situated’ in the students’ world.

Reflecting on catalysts

One of the initial catalysts for this project arose from my observation of students’
behaviour regarding feedback, with many more students opting to participate in a
post-assessment ‘feedback session’ than I had anticipated. Reflecting on the
results of this study and then thinking back to my observations, what insight can I
gain about these students? Were they drawn to attend the session because they
could see the relevance and wanted to understand more about Anatomy? Perhaps
they just wanted to be told the ‘right answer’? And what about the students who
chose not to attend? Were they happy with their grade and saw no point in attending, or perhaps they had little faith in the credibility of the source of feedback (i.e. me as the lecturer)? There are too many variables in the relationship between conceptions and responses to be able to answer these questions with 100% certainty. However, what this study reveals is a relationship between conceptions and responses that adds to the understanding of the complex and multifaceted ways in which students interact with feedback. Additionally, this study provides data that illustrates the way students personalise the situation or environment in terms of “the broad system of relevances of his or her life generally” (Ashworth & Greasley, 2009, p. 562). As such, these results give phenomenography an aspect of personal contextualised meaning, the absence of which has been a criticism of note (Ashworth & Greasley, 2009; Webb, 1997).

Focussing on self-regulation and linking to life-long learning

How do the findings of this study of variation in the categories of description of feedback, and variation in students’ responses to feedback, impact on the related notions of self-regulation and life-long learning? Reviewing again briefly, self-regulation of learning involves learners actively monitoring and regulating their own learning processes (Nicol & Macfarlane-Dick, 2006; Stracke & Kumar, 2010; Vermunt, 1998). From earlier, Butler and Winne (1995) describe self-regulated
learning as “a deliberate, judgmental and adaptive process…[in which] feedback is an inherent catalyst” (p. 246). As well as generating internal feedback, effective self-regulated learners “actively interpret external feedback…in relation to their internal goals” (Nicol & Macfarlane-Dick, 2006, p. 200). In relating self-regulation to life-long learning, Vermunt (1996) sees higher education as aiming to “educate people who should be able to think, decide and keep on learning independently” (p. 48). Nicol and Macfarlane-Dick (2006) reiterate this in their view that higher education needs to build on students’ abilities to assess their own work and generate their own feedback. Transference from the external regulation of learning to the internal regulation of learning is an important part of developing self-regulation (Vermunt, 1996). Further, opportunities need to be provided so that students can develop self-regulation capacity (Nicol & Macfarlane-Dick, 2006). In light of this, Carless et al. (2010) see the development of students’ self-regulation as being at the core of feedback processes. What perspective can the results from this research contribute to this conversation?

In the category A: Feedback as telling there is a reliance on external agents of feedback, a focus on being told ‘the right answer’ and highly conditional responses to feedback. Internally generated feedback, such a crucial part of self-regulation of learning (Nicol & Macfarlane-Dick, 2006) is not a strong feature in this category. Instead, there seems to be a dominance of external regulation processes and the impression of a passive approach to learning. Adding to this impression of passivity, there is little evidence that students actively engage with
external feedback in *A: Feedback as telling*. This is significant, as engagement with feedback is seen as an essential part of feedback’s effect on learners (Butler & Winne, 1995). A dependence in this category on ‘being told’ and ‘not knowing where you stand’ without feedback seem contradictory to the idea of independence in learning-for-life, as advocated by Vermunt (1998). It is hard to see how students with a conception of feedback such as this would be able to develop effective skills in self-regulation without significant ‘constructive friction’ (Vermunt & Verloop, 1999) to initiate expansion in their conceptual awareness. Perhaps there is a need to specifically yet gently challenge critical elements of these students’ experiences, for example through peer feedback initiatives, to allow episodes of such friction to occur.

In contrast, the variation in elements of *B: Feedback as guiding* gives the impression there will be room for self-regulation skills to develop. For example, although there is a preference for external expertise, the emergence of self as a source of feedback in this category suggests an increasing personal involvement and activeness in learning. As mentioned, internally generated feedback is considered to have a crucial role in self-regulation of learning (Nicol & Macfarlane-Dick, 2006). The application of feedback beyond the immediate boundary of the classroom in this category hints at transferability of skills to other learning contexts, another important element in self-regulation (Boekaerts, 1999). A focus in this category beyond the ‘right answer’ and on to more evaluative information such as ‘how I am doing?’ indicates a degree of monitoring
by students, also a step towards self-regulation (Butler & Winne, 1995). Overall there seems to be enough flexibility in the structure of the category such that feedback processes will be able to build students’ self-regulation capabilities. Again, peer feedback initiatives could be utilised to enhance the role of students in feedback processes (Carless et al., 2010). However, as in the previous category, negotiating the role of feedback agency will be important in encouraging students’ engagement in such initiatives. Also, the emergence of self as source in this category could be capitalised upon with self-feedback activities, such as pre- and post- self-evaluation exercises around a learning task.

Self-regulation of learning seems to be an intrinsic part of the experience of feedback in both C: Feedback as developing understanding and D: Feedback as opening up a different perspective. As the categories of description expand there are indications of an increasing confidence and self-reliance, evidenced by a lesser reliance on expert input in C: Feedback as developing understanding and even acceptance of incorrect information from external sources in D: Feedback as opening up a different perspective. Increasing confidence has been noted as a beneficial effect of feedback and a formative part of developing self-regulation in learning (Stracke & Kumar, 2010). The temporal perspective of both categories focuses learners’ attention to the future; feedback information for understanding or for an alternate view relates to monitoring and upgrading knowledge, an essential skill in self-regulation (Winne & Butler, 1995). Additionally, a view of information as something that can be crafted for understanding or, as in D: Feedback as opening up a different
perspective, as malleable and open to interpretation represents a belief about information-as-knowledge as a flexible entity, upon which feedback information can be evaluated and then retained or discarded. The ability to do this suggests a relatively high level of self-regulation. The multidirectional nature of communication in both categories suggests active involvement in learning processes, a further characteristic of self-regulated learning (Stracke & Kumar, 2010). A strong sense of self as source of feedback in both categories indicates that students are generating and attending to internal feedback, already noted as essential in self-regulation (Nicol & Macfarlane-Dick, 2006). The focus on information for future application and improvement in C: Feedback as developing understanding and D: Feedback as opening up a different perspective fits with a broader and temporally extended view of learning processes, inherent in lifelong learning (Boud, 2000). Self-regulation of learning, already present in both categories, could be developed further with, for example, initiatives towards increasing learners’ control of assessment.

The results from this study suggest that it is students’ conceptions of feedback rather than their ability to use feedback that constitute the underlying factors relating feedback to self-regulation. This contradicts the notion that the ability of students to use feedback effectively is related to their capacity to self-regulate their learning (Furnborough & Truman, 2009). As the categories of description in this study expand, where feedback comes from and the potential influences on students’ responses to feedback shift from an external to an internal emphasis.
This shift in emphasis mirrors that in Vermunt’s (1996) research into self-regulation of learning, where it seems that a main factor in determining self-regulation is the discernment of internal from external control of learning processes. In this study, the increasing emergence of self-regulatory capabilities in the categories of description bodes positively on the notion of independent thinkers taking on learning throughout life (Boud, 2000).

Developing a contextualised model

A useful way of drawing the findings of this research together and relating them to a wider audience is to express the findings in the form of a model. In investigating students’ conceptions and responses to feedback, this study looks at a small but significant part of what is a complex and situated process. The research is only a partial description of a larger whole; there are many aspects of the process that this study does not account for, such as teachers’ conceptions of feedback, students’ efficacy, and a socially critical view of feedback. As was noted in the review of the literature, several models of aspects of feedback already exist (e.g., Hattie, 2009; Nicol & Macfarlane-Dick, 2006; Price et al., 2011). Rather than developing another incomplete representation, it seems suitable to adapt an existing model to portray the results of this study. The model from Vermunt (1998), presented in Chapter Two, links mental models of learning and learning
orientations with regulation strategies and processing strategies (Vermunt, 1998). The model can be reinterpreted in regards to this study.

Figure 6.2 Relations between conceptions of, and responses to, feedback
(Adapted from Vermunt, 1998, p. 153)

In the adaptation above, the arrows connecting the various elements are double-ended, indicating bi-directionality between these elements. The figure also shows the relational connection between conception of feedback, influencing factors and response to feedback. Results from this study suggest that as conceptions of feedback vary, so do the various influencing factors that may act as mediators or potential barriers to responding to feedback. When any one of these factors gains enough significance they have a disruptive effect on students’
responses to feedback. The model is embedded in the students’ perception of the context of the situation. This context provides the background in which the model is situated, represented by the patterned surround. What is not known from this study is the effect of students’ beliefs about learning on the situation, hence this element and the arrows coming from it are drawn as dashed lines. However, as noted in the literature review, Butler and Winne (1995) emphasise that students are not blank slates and therefore it is likely that students’ beliefs about learning will influence the way that students interpret and respond to feedback. The various models developed thus far all portray part of the story; the model developed for this study contributes another piece to understanding an evolving, bigger picture.

Conclusions

This study makes several unique contributions to the growing body of research on feedback and undergraduate students. First, conceptions of feedback from students’ perspectives have been explored and four qualitatively different ways of thinking about feedback have been identified; the referential and structural elements that form these different categories of description have been detailed. Parallels can be drawn from these findings to other well-established, experiential
research findings. This strengthens the credibility of the findings in this study.

Second, students’ responses to feedback and the factors that influence their responses have been reported. For many students, there are potentially significant barriers between them and feedback. Third, a relationship between conceptions of feedback and responses to feedback has been revealed. This relationship suggests that the more inclusive and expansive the students’ view of feedback, the less likely there are to be significant factors potentially creating barriers to responding to feedback.

According to Nicol and Macfarlane-Dick (2006) “conceptions of assessment have lagged behind conceptions of learning in higher education” (p. 210). The same can perhaps be said for conceptions of feedback. This study provides a research-informed perspective from which conceptions of feedback can be further developed. In his criticism of phenomenographic research Webb (1997) posits that such studies often determine one ideal conception, which contains the elements that those in ‘power’ find acceptable – in this case, for example, views of agency, dialogue and application that emphasise the notions of self-direction and self-regulation. This ideal conception is then used as a sort of yardstick against which other conceptions are compared (Webb, 1997).

It is not the intention in this study to determine and compare to an ideal conception. Instead, the aim of this study is to represent the students’ voice in conceptions of feedback. In doing so, this study contributes to a deeper understanding of students’ experiences of feedback. This study has revealed
critical aspects of variation in the ways that students experience feedback, variations that enable students to respond to and engage with feedback in more or less effective ways (Marton & Booth, 1997). The potential impact of these critical aspects of variation on teaching practice are discussed in the following, final chapter.
### Table 6.1 An overview of research findings into aspects of learning and teaching

<table>
<thead>
<tr>
<th>Students' conceptions of learning</th>
<th>Saljö (1979a)</th>
<th>Learning as the quantitative increase in knowledge</th>
<th>Learning as memorisation</th>
<th>Learning as acquisition of facts and procedures that can be retained and utilised in practice</th>
<th>Learning as the abstraction of meaning</th>
<th>Learning as an interpretative process aimed at the understanding of reality</th>
</tr>
</thead>
<tbody>
<tr>
<td>Marton et al., (1993)</td>
<td>Learning as increasing one's knowledge</td>
<td>Learning as memorising and reproducing</td>
<td>Learning as applying</td>
<td>Learning as understanding</td>
<td>Learning as seeing something in a different way</td>
<td>Learning as changing as a person</td>
</tr>
<tr>
<td>Prosser et al., (1994)</td>
<td>Learning as accumulating more information to satisfy external demands</td>
<td>Learning as acquiring concepts to satisfy external demands</td>
<td>Learning as acquiring concepts to satisfy internal demands</td>
<td>Learning as conceptual development to satisfy internal demands</td>
<td>Learning as conceptual change to satisfy internal demands</td>
<td></td>
</tr>
<tr>
<td><strong>Students' conceptions of knowledge</strong></td>
<td>Dahlgren &amp; Pramling (1985)</td>
<td>Knowledge is separatistic – knowledge and reality are understood as separate entities with no link between them</td>
<td>Knowledge is sequential – a temporal sequence where knowledge is applied reality</td>
<td>Knowledge is integrated – not disentangled from reality; knowledge is knowledge about reality</td>
<td></td>
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</tr>
<tr>
<td>Perry (1970)</td>
<td>Position 1: World is seen in polar, dualistic terms</td>
<td>Position 2: Diversity of opinion is perceived, but seen as alien</td>
<td>Position 3: Diversity accepted as legitimate, but seen as temporary</td>
<td>Position 4: Restructured complex view of right/wrong vs. multiplicity</td>
<td>Position 5: Knowledge perceived as relativistic, dualistic in special cases</td>
<td>Position 6: Relativism accepted, personal commitment foreseen</td>
</tr>
<tr>
<td></td>
<td>Position 7: Initial commitment made by student</td>
<td>Position 8: Implications of commitment experienced</td>
<td>Position 9: Realisation of commitment as an ongoing activity</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Students' forms of understanding</strong></td>
<td>Entwistle &amp; Entwistle (1991)</td>
<td>Understanding as reproducing content from lecture notes without clear structure</td>
<td>Understanding as reproducing content and logical framework from lecture notes</td>
<td>Understanding as using own structure for individual topics, mainly from lecture notes</td>
<td>Understanding as adjusting structures from strategic reading to meet exam requirements</td>
<td>Understanding as developing an individual conception of the discipline from wide reading</td>
</tr>
</tbody>
</table>
Table 6.1 An overview of research findings into aspects of learning and teaching (cont'd)

<table>
<thead>
<tr>
<th>Teachers' conceptions of teaching</th>
<th>Pratt (1992)</th>
<th>‘Engineering’ – Teaching as delivering content</th>
<th>‘Apprenticeship’ – Teaching as modeling ways of being</th>
<th>‘Developmental’ – Teaching as cultivating the intellect</th>
<th>‘Nurturing’ – Teaching as facilitating personal agency</th>
<th>‘Social reform’ – Teaching as seeking a better society</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gow &amp; Kember (1993), Kember (1997)</td>
<td>Orientation to teaching as ‘knowledge transmission’</td>
<td>Teacher-centered/Content-oriented</td>
<td></td>
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<tr>
<td>Prosser et al., (1994)</td>
<td>Teaching as transmitting concepts of the syllabus</td>
<td>Teaching as transmitting the teacher's knowledge</td>
<td>Teaching as helping students acquire concepts of the syllabus</td>
<td>Teaching as helping students acquire teacher knowledge</td>
<td>Teaching as helping students develop conceptions</td>
<td>Teaching as helping students change conceptions</td>
</tr>
<tr>
<td>Samuelowicz &amp; Bain (2001)</td>
<td>Teaching as imparting information</td>
<td>Teaching as transmitting structured knowledge</td>
<td>Teaching as providing and facilitating understanding</td>
<td>Teaching as helping students develop expertise</td>
<td>Teaching as preventing misunderstandings</td>
<td>Teaching as negotiating understanding</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Teaching as encouraging knowledge creation</td>
</tr>
</tbody>
</table>

| Teachers' orientations to assessment | Samuelowicz & Bain (2002) | Assessment as reproducing bits of knowledge | Assessment as reproducing structured knowledge | Assessment as adapting structured knowledge | Assessment as transforming discipline knowledge | Assessment as transforming conceptions of the discipline |

<table>
<thead>
<tr>
<th>Students' conceptions of feedback</th>
<th>McLean (2011)</th>
<th>A: Feedback as telling</th>
<th>B: Feedback as guiding</th>
<th>C: Feedback as developing understanding</th>
<th>D: Feedback as opening up a different perspective</th>
</tr>
</thead>
</table>

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Chapter Seven
Implications, limitations and future directions
Chapter Outline

This final chapter consists of three sections. In the first section, the study findings are viewed in relation to their implications for teaching and suggestions are made for teaching practices. The second section of the chapter addresses the overall limitations of the study and the last section looks at avenues for future research arising from this study.
Part One: Implications for teaching

Introduction

This study arose in part from my observations and reflections on my direct experience within the classroom. Students were responding (and thus thinking) differently regarding feedback than I anticipated. Early in this study I expressed the hope that if we had a deeper understanding of students’ views of feedback we could enrich their learning experiences by engaging them in meaningful feedback. I also suggested that a deeper understanding of students’ views could inform feedback practices that support self-regulation of learning. As noted by Struyven et al. (2005) “students’ perceptions serve the purpose of guiding us in our reflective attempts to improve our educational practices and achieve a higher quality of learning and education for our students” (p. 338). Obtaining students’ views of feedback, as conceptual understandings, may help in generating an informed framework for discussion of feedback. So, it is appropriate to return to the classroom and see how the results of this study can inform the perspective of the teacher.
Understanding students’ experiences of feedback

This research contributes to an understanding of the qualitatively different ways in which students conceptualise feedback, the various factors that influence students’ responses to feedback, and reveals a relationship between the two. An understanding of the potential range of ways that students are thinking about feedback, such as identified in this study, means that teachers can be more informed in the way they approach students and feedback situations. An informed approach can enable teaching staff to function smarter regarding feedback, particularly in the face of increasing student numbers in many higher education environments. A smarter approach to feedback will hopefully equate to a ‘better’ approach to feedback. In this instance, ‘better’ does not necessarily mean more work for teachers. Instead, ‘better’ means working with students to figure out their view of feedback and tailoring feedback information to fit. It can also mean stimulating and challenging students to reflect on their current views.

As mentioned above, findings from this research suggest that the ways in which students approach or respond to feedback are related to their conceptions of feedback. This finding is supported by other literature in which relationships between approach and conception have been found. For example, there is evidence of the relationship between students’ approaches to learning and their conceptions of learning (Biggs, 1987; Entwistle & Ramsden, 1983; Marton & Säljö, 1976a; Säljö, 1979b). Also, a relationship has been found between teachers’ approaches to teaching and their underlying conceptions of teaching (Prosser et al.,
1994; Trigwell & Prosser, 1996a, 1996b). According to Orrell (2006) “a teacher’s view of the teacher-student relationship and their personal approach to learning and assessment is reflected in their feedback” (p. 444). A reasonable extension of this idea is that teachers’ approaches to feedback are strongly influenced by their underlying beliefs about feedback. Research into the variation in the ways that people understand or experience various phenomena has shown that broader or more holistic conceptions are related to a broader approach to the phenomenon (Prosser & Trigwell, 1999; Reid & Petocz, 2006). An implication of this is that the broader the conceptualisation of feedback held by the teacher, the broader the approach they are able to adopt towards feedback. This has significance for professional development for teachers: if as teachers we want to engage students in meaningful feedback, perhaps we need to gain a deeper understanding of - and also potentially challenge - our own conceptions of feedback?

Engaging in meaningful feedback

How can students and teachers engage in meaningful feedback? Perhaps the first challenge is to address the variation in engagement found in the categories. In this study, responses to and engagement with feedback are described as ‘conditional’ in A: Feedback as telling and as ‘affected’ in B: Feedback as guiding. Many factors were identified in these categories that seem to act as potential barriers to responding to feedback. Although there were less influencing factors identified in
the other two categories in this study, a few potential barriers were found. Therefore, there may be a need for teachers to explicitly address the various influencing factors with students. For instance, in this particular group of students the role of the teacher in modelling professional behaviour (e.g., by demonstrating engagement in feedback) is an important part of these students ‘becoming’ effective health professionals (Dall’Alba, 2009). Influencing factors can also be addressed more directly; for instance, in-class discussions about the relevance of feedback, constructing criteria with students about being ‘providers’ of feedback, and creating opportunities that require students to apply feedback are ideas that have potential. Teachers’ enthusiasm within subjects and across the curriculum is also noted as a significant factor affecting student engagement (Bryson & Hand, 2007).

However, efforts to enhance students’ engagement in feedback and make feedback more meaningful will essentially be wasted if there is no opportunity for feedback to be iterative. The importance of making feedback an iterative process is emphasised by Orrell (2006) whose investigation of academics’ actual practice reveals a “striking absence [of] any evidence that students would get the opportunity to redo the tasks or be required to act on the feedback” (p. 449). This was certainly the case in my own practice and anecdotal evidence from my colleagues suggests that I am not alone. Orrell (2006) sees this as “representative of an omission in educational design because of a failure to construe assessment and feedback as pivotal rather than a postscript to teaching and learning” (p. 442,
original emphasis). In my situation for example, the post-assessment feedback session from which this project arose can be better designed to include tasks that require students to actually do something with feedback information, such as checking or updating their understanding. Redesigning ‘one-off’ learning and assessment tasks to be cyclic or iterative can also enhance the meaningfulness of feedback (Nicol & Macfarlane-Dick, 2006). Another suggestion is to provide students with authentic learning experiences, tasks that are contextually related to students’ learning environments (McCune, 2009). Enhancing the meaningfulness of feedback, including negotiating ‘authenticity’ in learning tasks, may encourage students to become more active in responding to feedback. More active responses to feedback, coupled with increased opportunities for dialogue (Price et al., 2011) can lead to enhanced engagement in the feedback process.

Enhancing feedback in support of self-regulation and life-long learning

An enhanced engagement in feedback, argued for above, is important because it is an essential part of self-regulation (Butler & Winne, 1995). A conception of feedback as ‘transmission of information’ from an expert to a novice is not a view that develops students’ capacity in learning. Therefore, in order to enhance the role of feedback in self-regulation and life-long learning, a change in the way feedback is conceptualised is required. As previously noted, there have been
substantial changes in the ways that learning and teaching are thought about in higher education (Nicol & Macfarlane-Dick, 2006). Also noted earlier, there is a reconceptualisation of feedback emerging in the literature, whereby feedback is seen as a process of communication, as a dialogue rather than a monologue (Higgins et al., 2001; Nicol, 2010; Nicol & Macfarlane-Dick, 2006). The multidirectional nature of communication identified in C: Feedback as developing understanding and D: Feedback as opening up a different perspective suggests that these two categories are congruent with the idea of feedback as dialogue. In contrast, the unidirectional communication dominant in A: Feedback as telling and B: Feedback as guiding suggests that these two categories are not. Therefore, emphasising dialogue as an essential element of feedback will require the deliberate design of learning and assessment tasks that create opportunities for discussion.

Peer-to-peer feedback initiatives present a way of encouraging students to have a “proactive rather than reactive role in generating and using feedback” (Nicol & Macfarlane-Dick, 2006, p. 199). Feedback information targeted towards setting goals, applying learning tactics and monitoring skills is identified by Butler and Winne (1995) as the kind of feedback best able to enhance self-regulation of learning. Therefore there is a need to focus on this kind of feedback, from whomever is the source. In A: Feedback as telling and to a lesser extent in B: Feedback as guiding, attention to peers is not emphasised. Therefore drawing staff and students’ attention to the value in providing as well as receiving feedback (Boud, 2000; Sadler, 2010) can be a way of seeing merit in
peer feedback. Both students and teaching staff need to see the development of skills in self-regulation as an important part of feedback processes (Carless et al., 2010). In assisting this point of view, both students’ and teachers’ conceptions need to be aligned with, rather than dissonant to (Vermunt & Verloop, 2000) the idea of feedback as dialogical communication. Again, the role of teachers in modeling dialogue in feedback can help create conditions in which alignment and expansion of conceptions can be fostered.

In a connection to Kolb’s (1984) experiential cycle of learning, Sargeant, Mann, van der Vleuten and Metsemakers (2009) suggest ‘reflection’ as a way of enhancing the link between receiving and using feedback. The authors describe reflection as “an iterative process...allows the elements of the experience to be revisited, analysed and integrated into one’s existing base of knowledge and understanding, as a basis for future experience” (Sargeant et al., 2009, p. 400). The idea of reflection to promote learning is not new, but what Sargeant et al. (2009) found is the integral role of reflecting on feedback in determining its use. Are students interested in obtaining feedback to reflect on their learning, or do they just want a grade or the model answers? (Wotjas, 1998). Results from this study indicate that there are occasions when a grade or model answers are exactly what students want. These occasions seem to be related to barriers to responding to feedback such as ‘subject relevance’, ‘interest in content’ and ‘approachability of source of feedback’. The greater emphasis in the findings of this study however is on feedback as information for applying and improving. This is the case even if
references to the future seem abstract, such as in *B: Feedback as guiding*. Thus, conceptual openings exist for introducing reflection on feedback to promote future learning. Not only is the idea of ‘reflective practice’ (Schön, 1983) important for these students in particular as they *become* physiotherapists but active reflection is also seen as contributing towards life-long learning (Stracke & Kumar, 2010). There is an onus at individual, departmental and institutional levels to create and promote an environment where dialogic feedback, and reflection on that feedback, are part of the culture.

**Concluding comments**

In terms of the situated nature of this research, what are the implications of this study on the ‘Otago Graduate Attributes’ profile (University of Otago, 2005, see Appendix I), particularly with regard to the notions of self-regulation and life-long learning? For example, the profile emphasises the emergence of graduands with skills in critical thinking and a “commitment to life-long learning, with the ability to apply knowledge, develop skills, adapt to a changing environment and acquire new skills” (University of Otago, 2005). However, unless their experience at Otago contains meaningful instances of constructive friction (Vermunt & Verloop, 1999) that stimulate conceptual change, students who express views aligned with *A: Feedback as telling* may not emerge with such skills. For many students though, their conception of feedback stands them in good stead to
achieving these qualities. Peer-to-peer feedback initiatives in particular could be an effective way of encouraging students’ development of opinions and critical thought. I believe there is also benefit to be gained in looking at how we think about and what we do regarding assessment.

Feedback can be seen as a crucial interface between learning, teaching and assessment. It is also a missing link that connects students and teachers to each other and to their learning context. Therefore, there is a need to unpack the mythologies of feedback that exist in both students’ and teachers’ perspectives (Adcroft, 2011). How can students be encouraged, facilitated, ‘taught’ to engage with, understand and then make use of feedback? In how many ways must feedback be accessed in order for students to experience it meaningfully? The results of this study provide insight into the variation that exists in students’ conceptions of feedback. I propose that the variation theory of learning (Marton & Tsui, 2004) provides a way of creating spaces where variation can be discerned and differences in elements of feedback can be experienced.

As a result of the findings of this study, and in consideration of a changing view of feedback in the higher education literature, several directions for professional development exist. For instance, identifying and challenging own conceptions of feedback; emphasising a separation between feedback and assessment; building up awareness of feedback processes; embedding these processes into the curriculum; ‘giving-up’ some power over the control of learning processes; creating and promoting spaces for constructive friction to
occur; and modeling views of feedback that encourage growth. A central element of these activities involves bringing attention to feedback as an object of, rather than an assumed part of, the act of learning.

Part Two: Limitations of the research

This research reports on a self-selected group of University of Otago undergraduate second year physiotherapy students’ conceptions of feedback. The characteristics of the sample resemble the class characteristics, in terms of gender and average grade achieved in the anatomy assessment. However, it is a “contextualised snapshot” (Anderson et al., 2010, p. 7) of students’ experiences of feedback. In actuality, the project reports on my interpretations and analysis of the aforementioned. This research cannot be separated from the perspective influenced by my positivist roots; there is an interactive relation between the research and me (Sandberg, 1997). Fontana and Frey (1998) acknowledge this background influence as part of the tension generated when the researcher is also the author. For example, the influence of my more positivist background can be seen in my limited consideration in this study of aspects of feedback such as social equity (Taras, 2006) and emotional effect (Värlander, 2008). There will always be further areas to explore and develop in my life-long research journey. What is important is recognising and maintaining an ‘interpretive awareness’ (Sandberg, 1997) of my particular background perspective.
Interviews form the only source of data for this study. Therefore the study findings are limited due to a lack of triangulation of data. A further limitation of the findings arises around the lack of multiple-researcher perspectives. Robust discussions with my supervisors about the data and my interpretations were important. However, I was the only one who undertook a detailed exploration of the data to the extent that I did. As a result of these factors, the data are limited to both the kind of data available via interview, and how far I am able to analyse it, as a lone researcher (Sandberg, 1997). This does not mean the results are incorrect or incomplete; instead, because of these factors, and because of the layered nature of awareness in general, the results arising from this study can only ever be a partial description (Marton & Booth, 1997).

Anderson et al. (2011) claim that “the influence of our own perceptions, experiences and frames of reference can be seen as both a strength and a limitation”(p. 3) in this kind of interpretative qualitative research. A particular strength of my positivist background is the desire to seek ‘evidence’ to support or negate claims. This study has been strengthened by my conscientious use of excerpts from the research interviews as grounded data in order to illustrate and enhance the rigour of the findings (Thomas, 2006). Related to this is the desire to emphasise rigour in the research process by providing as much detail as possible, so that the research community at large can determine the appropriateness of the research methods and the defensibility of the interpretations made (Åkerlind, 2005).
There is no escaping the fact that research of this nature is highly situated, involving a particular group of students, in a particular situation, reported on from a particular perspective. One effect of this ‘situatedness’ is a limiting of the generalisability of findings from such research. However, the students’ views of feedback resemble the patterns of results of other research in the experiential literature on learning and understanding. This relationship provides significant support for the veracity of the findings of this study.

There are other effects of highly situated research, including the capacity of such studies to present rich accounts of the variety of human experience. It is from these accounts that a better insight and understanding of how other people see the world can be gained. Therefore, an important strength of research such as this one is its “powerful heuristic value in aiding insights into teaching and learning” (Åkerlind, 2003, p. 378).
Part Three: Directions for future research

As expected, this research project raises more questions than it answers. These questions form the basis of ideas for further research into feedback and the students’ world. For example, what are the variations in conceptions of feedback amongst different student groups? To what extent are the findings in this study contextualised to this particular group of participants? Also, the results from this study represent an interpretation from my particular perspective; perhaps another researcher would identify different or additional categories of description?

There were large variations in the occurrence of feedback reported by students in this study, all of whom were doing the same course. For some students, feedback was a constant occurrence, whilst other students struggled to think of a time when they had experienced feedback at university at all. What does this reflect? Is there variability in the amount of feedback activity for individual students, or is it variability in what is being recognised as feedback? How does this variation in experience relate to students who don’t appear to be overtly responding to feedback, for example those students from the Year Two cohort who did not attend the post-assessment feedback session? What are these students thinking about feedback? How important is it to investigate their responses to feedback? And what are the implications for these students regarding self-regulation of future learning?
A more dynamic perspective would be to consider how conceptions of feedback evolve or develop over time. For example, the student who graduated at the top of the class in the final year was expressing a firm understanding of Feedback as telling at the time of the research interview in Year Two. Furthermore, this student saw assessment as a focus on regurgitation of knowledge. What was this student thinking about feedback and assessment after another two and a half years of physiotherapy education? What influence does the design of learning and assessment tasks have on students’ development of conceptions of feedback that change from an authority-dependent, external view such as in Feedback as telling to a critically-evaluative, internal view illustrated in Feedback as opening up a different perspective? A longitudinal perspective would be invaluable in detecting potential movement in conceptions.

Finally, there are several questions related to the context of physiotherapy education. Shulman (2005) identified the existence of ‘signature pedagogies’, particularly evidenced in the professional disciplines. Such pedagogies reflect the way knowledge is seen in the discipline, and form a framework for “the fundamental ways in which future practitioners are educated in their new professions” (Shulman, 2005, p. 52). To what extent are the findings in this study reflective of such signature pedagogies? For example, for practical skills knowledge, Belinda considers “that’s where the feedback is important”. In contrast, her approach to feedback for theoretical knowledge is to “look it up in the text book”. A further suggestion of links to signature pedagogies is found in
the observation from this study of students with a significant sporting background, who mentioned using their own sense of feel as a form of feedback. Other participants did not mention a sense of feel. Is this kinaesthetic kind of feedback a ‘signature feedback’ for the discipline? Does kinaesthetic feedback make a difference in learning and performing manual therapy techniques? If so, how can kinaesthetic feedback be developed in the undergraduate physiotherapy curriculum? Additionally, how would embedded opportunities for reflection on feedback across the curriculum impact on undergraduate physiotherapy students’ development as reflective healthcare professionals (Dall’Alba, 2009; Schön, 1983)?

There are multiple directions for me to travel in setting out on future research journeys. My personal choice would be exploring opportunities to develop peer-to-peer feedback processes, and embedding feedback of this kind into the curriculum. Why this path in particular? Because I believe that, if students and staff can experience and see value in peer feedback initiatives, then that is one step closer to being able to share the perspective of ‘assessor’, reducing the power differential in the learning environment and developing students as “critical connectors between assessment and learning” (Orsmond & Merry, 2011, p. 126).
An Anatomy of Feedback

Reference List


An Anatomy of Feedback | Reference List


Appendix A

Key Question 1: What did you get out of the feedback you received from the first test?

<table>
<thead>
<tr>
<th>Comment Clusters (determined by participants)</th>
<th>No. of comments in cluster</th>
<th>No. of participants indicating importance</th>
</tr>
</thead>
<tbody>
<tr>
<td>• “a chance to see the paper from organiser’s point of view”</td>
<td>3</td>
<td>1</td>
</tr>
<tr>
<td>• “chance to speak with lecturer”</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• “a chance to not be just a number”</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• “a need for more feedback detail”</td>
<td>4</td>
<td>2</td>
</tr>
<tr>
<td>• “not in depth enough”</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• “too much to cover in a short amount of time”</td>
<td></td>
<td></td>
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<tr>
<td>• “not specific enough”</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• “general feedback about class performance”</td>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td>• “what was meant by some more ambiguous questions”</td>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td>• “motivation to look back over test”</td>
<td>2</td>
<td>4</td>
</tr>
<tr>
<td>• “increased my level of motivation for next test”</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• “better idea of the type of questions more likely to come up in future tests”</td>
<td>3</td>
<td>6</td>
</tr>
<tr>
<td>• “marking guidelines”</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• “good to reflect on style of marking”</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• “direction”</td>
<td>5</td>
<td>7</td>
</tr>
<tr>
<td>• “areas that required more work”</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• “helped to direct my learning/studying”</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• “what I needed to work on”</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• “what to focus on when studying”</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• “reinforced knowledge”</td>
<td>10</td>
<td>7</td>
</tr>
<tr>
<td>• “good revision”</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• “that I actually do know something”</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• “reinforcement of my knowledge”</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• “good to remember things for my own learning”</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• “could see meaningful results from my efforts”</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• “a shock as to how quickly I forget information”</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• “gave me an indication of how effective”</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
my studying had been”
- “greater memory of content I’d forgotten”
- “revision of core material”

<table>
<thead>
<tr>
<th>5</th>
<th>10</th>
</tr>
</thead>
</table>

- “answers to questions”
- “answers”
- “answers to questions”
- “answers to questions I didn’t know”
- “good to know where I went wrong in the exam and why”

<table>
<thead>
<tr>
<th>11</th>
<th>10</th>
</tr>
</thead>
</table>

- “specificity needed to answer question”
- “to be more specific with answers”
- “level of knowledge required for further tests”
- “made me aware of the depth/detail that was required”
- “how much detail was needed in our answers”
- “better understanding of how to answer questions eg. depth required”
- “better understanding of the way to write an answer”
- “degree of detail required for answers”
- “how close or far off I was from the correct answer”
- “understanding about depth of information required to get full marks for a question”
- “annoyance of performance”
Key Question 2: How could the feedback be more useful?

<table>
<thead>
<tr>
<th>Comment clusters (determined by participants)</th>
<th>No. of comments in cluster</th>
<th>No. of participants indicating importance</th>
</tr>
</thead>
<tbody>
<tr>
<td>• “giving examples of where people went wrong”</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>• “having feedback session sooner (questions not forgotten)”</td>
<td>1</td>
<td>4</td>
</tr>
<tr>
<td>• “looking at the clinical applicability of the questions and their answers”</td>
<td>1</td>
<td>4</td>
</tr>
<tr>
<td>• “more in-depth explanation of correct answers”</td>
<td>2</td>
<td>5</td>
</tr>
<tr>
<td>• “more in depth answer of question”</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• “the sessions could have been longer”</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>• “more time or follow-up session for those who still don’t understand the answers”</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• “more time for review session”</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• “by the review session being longer - not so rushed”</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• “have 3 feedback sessions, hence more time to be more specific and focused on the answer”</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• “suggestions on how to tackle similar questions in future”</td>
<td>2</td>
<td>7</td>
</tr>
<tr>
<td>• “giving ‘tips’ on the best (or good) way to learn complex stuff and remember”</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• “direction given on most important aspects to study in future”</td>
<td>2</td>
<td>7</td>
</tr>
<tr>
<td>• “areas most important to focus on/study for next exam”</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• “done in smaller groups”</td>
<td>5</td>
<td>7</td>
</tr>
<tr>
<td>• “smaller groups to allow individual questions”</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• “have discussions about the answers, and follow up questions”</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• “time to ‘debate’/discuss the answer, so students can ask questions if they are still unsure”</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• “have opportunities to meet with tutors about areas you went wrong”</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Number</td>
<td>Suggestions</td>
<td></td>
</tr>
<tr>
<td>--------</td>
<td>-------------</td>
<td></td>
</tr>
</tbody>
</table>
| 3      | “by being given written exemplar answers”  
“provide us with answers so we could follow instead of copying down answers”  
“copy of written answers and marking schedule handed out at start” | 9 |
| 5      | “to see the prossections/E12s etc...again as we went over the answers”  
“diagram of where the stations were”  
“pictures from the questions when giving answers”  
“by being shown all the specimens, slides, pictures etc in the test at the review session”  
“more visual reminders” | 10 |
| 8      | “having our own exam scripts in front of us”  
“seeing the actual answers I gave to see how they compare to the model answers”  
“handing exam scripts back prior to review session for students to analyse their answers and generate questions”  
“have your answers available”  
“being able to get our test back, even if only for review”  
“access to own paper to compare answers (see where marks lost)”  
“would have been really good to have our own paper to look back over”  
“copy of exam paper - see which answers got wrong therefore which need to work on” | 10 |
| 2      | “each person have the exam questions, to follow the organiser through the answers”  
“give us a hard copy of the questions and answers for future revision” (emphasis as per script) | Unable to ascertain as group undecided; agreed there is something about having a hard copy to look at when being given feedback, but this does not necessarily need to be own paper (?) |
ETHICAL APPROVAL AT DEPARTMENTAL LEVEL OF A PROPOSAL INVOLVING HUMAN PARTICIPANTS (CATEGORY B)

NAME OF DEPARTMENT: Department of Anatomy and Structural Biology, University of Otago.

TITLE OF PROJECT: Students’ Conceptions of Feedback.

PROJECTED START DATE OF PROJECT: May 2007

STAFF MEMBER RESPONSIBLE FOR PROJECT: Prof. Helen Nicholson.

NAMES OF OTHER INVESTIGATORS OR INSTRUCTORS: Dr. Carol Bond (co-supervisor, Director of Student Learning Centre); Angela McLean (student, enrolled in PhD degree).

BRIEF DESCRIPTION OF THE PROJECT: The aim of the project is to investigate and identify the range of conceptions of feedback held by students and to explore the relationship between students’ conceptions of feedback and how students process feedback.

Analysis of the data above will assist in development of an explanatory approach for the generation of feedback. This, in turn, may enhance student learning by understanding the needs of learners, engaging learners in meaningful feedback, making learners more aware of the roles and uses of feedback and enhancing feedback in support of self-regulation of learning.

A qualitative approach will be used involving Second Year Physiotherapy students taking a Functional Human Anatomy paper in the Department of Anatomy and Structural Biology. Participants will be selected for inclusion based on their grade obtained in an internal assessment task (circuit test) and their attendance or non-attendance at a feedback session following the assessment. Participants will be invited for interview and the interview will be transcribed and analysed.

The end-point of the project will be when the data has been analysed and written up in the form of a doctoral thesis and, if appropriate, for publication.
DETAILS OF ETHICAL ISSUES INVOLVED:

It is not anticipated that there will be any harm or discomfort as a result of participating in this project, but there are a few ethical issues to be considered.

Although personal data will not be collected from participants that could identify them, they will be asked to provide and discuss their opinions and experiences and this raw data will be recorded. As such, it is important to ensure participants are aware of the fact that information they are providing is being recorded, the information is being collected for the purpose of the aims of the research project, the information will be analysed and discussed by the researchers and will form the basis of the thesis, the participants have the right to not supply the information and withdraw at any stage from the project with no disadvantage to themselves of any kind, and participants have the right to read their interview transcript should they wish to. Participants will be provided with an information sheet which addresses these issues (please see attached information sheet).

Although the nature of the interview will be open-ended, the following general areas will be focus points for the interview: talking about what ‘feedback’ means for participants; talking about what might influence the way participants go about dealing with feedback. It will not be possible to provide details of the exact nature of the questions to be asked, but participants will be reminded of their right to decline to answer any particular question(s) and their right to withdraw from the project at any stage without any disadvantage, should the line of questioning develop in such a way that they feel hesitant or uncomfortable.

ACTION TAKEN

Approved by Head of Department

Approved by Departmental Committee

Referred to University of Otago Human Ethics Committee

Referred to another Ethics Committee

Please specify:

DATE OF CONSIDERATION: ..........................

Signed (Head of Department): ..........................

Please attach copies of any Information Sheet and/or Consent Form
Notes concerning Category B Reporting Sheets

This form should **only be used** for proposals which are **Category B** as defined in the policy document "Policy on ethical practices in research and teaching involving human participants", and which may therefore be properly considered and approved at departmental level;

2. A proposal can only be classified as Category B if **NONE** of the following is involved:
   - Personal information - any information about an individual who may be identifiable from the data once it has been recorded in some lasting and usable format, or from any completed research;
     (Note: this does not include information such as names, addresses, telephone numbers, or other contact details needed for a limited time for practical purposes but which is unlinked to research data and destroyed once the details are no longer needed)
   - The taking or handling of any form of tissue or fluid sample from humans or cadavers;
   - Any form of physical or psychological stress;
   - Situations which might place the safety of participants or researchers at any risk;
   - The administration or restriction of food, fluid or a drug to a participant;
   - A potential conflict between the applicant’s activities as a researcher, clinician or teacher and their interests as a professional or private individual;
   - The participation of minors or other vulnerable individuals;
   - Any form of deception which might threaten an individual’s emotional or psychological well-being.

If any of the above is involved, then the proposal is Category A, and must be submitted in full to the University of Otago Human Ethics Committee using the standard Category A application form, and before the teaching or research commences;

3. A separate form should be completed for each teaching or research proposal which involves human participants and for which ethical approval has been considered or given at Departmental level;

4. The completed form, **together with copies of any Information Sheet or Consent Form**, should be returned to the Manager Academic Committees or the Academic Committees Assistant, Registry, **as soon as the proposal has been considered at departmental level**;

5. The Information Sheet and Consent Form should **NOT** include the statement “This proposal has been reviewed and approved by the University of Otago Human Ethics Committee” as this is inappropriate for Category B proposals. A statement such as statement “This proposal has been reviewed and approved by the Department of ......, University of Otago” may however be used;

6. Please ensure the Consent Form and the Information Sheet have been carefully proofread; the institution as a whole is likely to be judged by them;

7. A Category B proposal may commence as soon as departmental approval has been obtained. **No correspondence will be received back from the University of Otago Human Ethics Committee concerning this Reporting Sheet unless the Committee has concerns**;

8. This form is available electronically at the following web address: [http://telperion.otago.ac.nz/acadcomm/categoryb.html](http://telperion.otago.ac.nz/acadcomm/categoryb.html)
Thank you for showing an interest in this project. Please read this information sheet carefully before deciding whether or not to participate. If you decide to participate we thank you. If you decide not to take part there will be no disadvantage to you of any kind and we thank you for considering our request.

**What is the aim of the project?**

This project is being undertaken as part of the requirements for a doctorate. The aim of the project is to investigate the ideas that students have about feedback and explore the sorts of factors that influence how students understand feedback.

**Who is being sought to participate in this project?**

Participants are being sought from the cohort of Second Year Physiotherapy students taking the Functional Human Anatomy paper (PHTY220) in the Department of Anatomy and Structural Biology.

Potential participants will be selected based on the grade they obtained in the recent circuit test and their attendance or non-attendance at the feedback session following the assessment.

**What will you be asked to do?**

Should you agree to take part in this project, you will be asked to participate in an individual interview of approximately 60 minutes duration. The interview will be audio-taped then transcribed and analysed.

It is not anticipated that you will experience any harm or discomfort in the process of participating in this project.

Please be aware that you may decide not to take part in the project without any disadvantage to yourself of any kind.

**Can you change your mind and withdraw from the project?**

You may withdraw from participation in the project at any time and without any disadvantage to yourself of any kind.
What data or information will be collected and what use will be made of it?

Information will be collected via an interview, in which you will be asked about your ideas and thoughts regarding feedback.

This project involves an open-questioning technique where the precise nature of the questions which will be asked have not been determined in advance, but will depend on the way in which the interview develops. Consequently, although the University of Otago Human Ethics Committee is aware of the general areas to be explored in the interview, the Committee has not been able to review the precise questions to be used. In the event that the line of questioning does develop in such a way that you feel hesitant or uncomfortable you are reminded of your right to decline to answer any particular question(s) and also that you may withdraw from the project at any stage without any disadvantage to yourself of any kind.

The audio-taped interview will be transcribed verbatim and you will be able to read the transcript. Access to the raw data will be restricted to the researchers, with one exception: the audiotapes will be sent to an independent, external transcriber for verbatim transcription. In all instances the raw data will be coded to preserve your anonymity. The data collected will be securely stored in such a way that only the researchers will be able to gain access to it. At the end of the project any personal information will be destroyed immediately except that, as required by the University's research policy, any raw data on which the results of the project depends will be retained in secure storage for five years, after which it will be destroyed.

Reasonable precautions will be taken to protect and destroy data gathered by email. However, the security of electronically transmitted information cannot be guaranteed. Caution is advised in the electronic transmission of sensitive material. The results of the project may be published and will be available in the library but every attempt will be made to preserve your anonymity.

You are most welcome to request a copy of the results of the project should you wish.

What if participants have any questions?

If you have any questions about our project, either now or in the future, please feel free to contact either:-

Angela McLean or Professor Helen Nicholson
Department of Anatomy & Structural Biology or Otago School of Medical Sciences
University Telephone Number: 479-5145 University Telephone Number: 479-5134

This project has been reviewed and approved by the Department of Anatomy & Structural Biology, University of Otago
Appendix D

Reporting Sheet for use ONLY for proposals considered at departmental level

Students’ Conceptions of Feedback

CONSENT FORM FOR PARTICIPANTS

I have read the Information Sheet concerning this project and understand what it is about. All my questions have been answered to my satisfaction. I understand that I am free to request further information at any stage.

I know that:

1. my participation in the project is entirely voluntary;

2. I am free to withdraw from the project at any time without any disadvantage;

3. the interview will be audio-taped and transcribed;

4. the data (audio tapes and transcripts) will be destroyed at the conclusion of the project. Any raw data on which the results of the project depend will be retained in secure storage for five years, after which it will be destroyed;

5. this project involves an open-questioning technique where the precise nature of the questions which will be asked have not been determined in advance, but will depend on the way in which the interview develops and that in the event that the line of questioning develops in such a way that I feel hesitant or uncomfortable I may decline to answer any particular question(s) and/or may withdraw from the project without any disadvantage of any kind;

6. there is no anticipated risk of harm or discomfort to me by participating in this project;

7. the results of the project may be published and available in the library but every attempt will be made to preserve my anonymity;

8. that reasonable precautions have been taken to protect data transmitted by email but that the security of the information cannot be guaranteed.

I agree to take part in this project.

...............................................................................

(Signature of participant) .................................. 

................................................................. (Date)

This project has been reviewed and approved by the Department of Anatomy & Structural Biology, University of Otago.
Appendix E

Did you attend the Anatomy feedback session earlier in Semester 1?

YES ☐ NO ☐

If “YES”, why?
_________________________________________________________
_________________________________________________________
_________________________________________________________

If “NO”, why?
_________________________________________________________
_________________________________________________________
_________________________________________________________

Would you be willing to talk about your thoughts about feedback, in a one-on-one situation with Angela early next semester?

YES ☐ NO ☐

If “YES”, please write your contact details below:

Name _________________________________________________________
Phone/email ______________________________________________________
Appendix F

Hi (insert name)

During an anatomy lab earlier in the year I collected a form on which you’d indicated you would be willing to talk about your thoughts on feedback, in a one-on-one situation with me at some stage this semester.

I’d like to start interviewing people in your class and invite you to be part of the first cohort. Interviews will take around 40-60 minutes and will be done in the Anatomy Department. What we talk about will be recorded so it can be transcribed later, but you’ll remain anonymous and will have the right to withdraw from the project at any stage if you want.

The idea is to collect student’s views on feedback so these can be analysed and contribute to my thesis in education. Could you please let me know if you are still keen to be involved and indicate which of the time slots are suitable for you:

Day, Date: 9am-11am, 11am-1pm, 1pm-3pm, 3pm-5pm
Day, Date: 9am-11am, 11am-1pm, 1pm-3pm, 3pm-5pm
Day, Date: 9am-11am, 11am-1pm, 1pm-3pm, 3pm-5pm
Day, Date: 9am-11am, 11am-1pm, 1pm-3pm, 3pm-5pm

Thanks
Angela McLean
Appendix G

Hi (insert name)

A couple of weeks ago I sent out an e-mail asking if people would like to be part of a project looking at student views of feedback, and you were one of the cohort of people to be approached. The process involves coming along to a one-on-one interview with me and talking about a few things related to feedback. The interview will be recorded and will take about 40-60mins.

If you would still like to be involved could you please indicate which of the following timeslots suits you:

Day, Date: 9am-11am, 11am-1pm, 1pm-3pm, 3pm-5pm
Day, Date: 9am-11am, 11am-1pm, 1pm-3pm, 3pm-5pm
Day, Date: 9am-11am, 11am-1pm, 1pm-3pm, 3pm-5pm
Day, Date: 9am-11am, 11am-1pm, 1pm-3pm, 3pm-5pm

or suggest another time that would suit.

If you'd prefer not to be involved then please let me know by return e-mail - and I thank you for your original interest anyway.

kind regards
Angela
Appendix H

Interview questions
Can you tell me about an experience where you got some feedback on an assignment or test, maybe at school or at university?

What is feedback for you?

How would you describe it?

How do you go about getting or using feedback?

What kind of feedback do you find most useful (written, verbal, hands-on)?

What impact does feedback have on you?

Prompts and probes
What do you mean by...?

How do you understand that?

Can you explain that a little more?

Can you give an example?

What does that mean to you?

You mentioned... - can you say more about that?

Tell me about how you see...

What is ..... for you?

How did you go about that?

How were you thinking about that?

Why is that so?

Why did you do that?
Appendix I

THE UNIVERSITY OF OTAGO GRADUATE

The following attributes are to be fostered at the University of Otago:

• COMMUNICATION: the ability to communicate information, arguments and analyses effectively

• CRITICAL THINKING: the ability to analyse issues logically, consider different options and viewpoints, and make informed decisions

• CULTURAL UNDERSTANDING: an understanding of cultural diversity within the framework of the Treaty of Waitangi, and biculturalism and multiculturalism in New Zealand

• ETHICS: a knowledge of ethics, ethical standards and social responsibility

• GLOBAL PERSPECTIVE: an appreciation of the global perspective in their chosen discipline(s), and an informed sense of the impact of the international environment on New Zealand and New Zealand’s contribution to the international environment

• IN-DEPTH KNOWLEDGE: a deep, coherent and extensive knowledge of at least one discipline coupled with an understanding of the fundamental contribution of research

• INFORMATION LITERACY: a basic understanding of information literacy and specific skills in acquiring, organising and presenting information, in particular through computer-based activity

• INTERDISCIPLINARY PERSPECTIVE: intellectual openness and curiosity, and the awareness of the limits of current knowledge and of the links between disciplines

• LIFELONG LEARNING: a commitment to lifelong learning, with the ability to apply knowledge, develop existing skills, adapt to a changing environment, and acquire new skills

• RESEARCH: the ability to conduct research by recognising when information is needed, and locating, retrieving, evaluating and using it effectively

• SCHOLARSHIP: a commitment to the fundamental importance of the acquisition and development of knowledge and understanding

• SELF-MOTIVATION: the capacity for self-directed activity and the ability to work independently

• TEAMWORK: the ability to work effectively as both a team leader and a team member

• WORKPLACE-RELATED SKILLS: enterprise, self-confidence and a sense of personal responsibility within the workplace and community

(Adopted by Senate March 2003)