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Lecturing proficiency and effectiveness of New Zealand accounting and finance academics

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Executive Summary

This report examines research relevant to how accounting and finance academics can improve their proficiency and effectiveness as teachers and identifies practical techniques these educators can use to improve their students' learning experience. Particular attention is paid to how accounting and finance educators use and conduct lectures. A conceptual model is presented that links factors that influence lecturing proficiency and effectiveness with student learning experience satisfaction and learning effectiveness, thus offering educators insights into teaching practices. The model also provides scholars with research propositions amenable to empirical investigation.

Insights gained from a literature review and the findings from a series of eight focus group sessions involving 43 University of Otago undergraduates were used to produce a survey to examine factors associated with student learning satisfaction and learning effectiveness. The survey was administered to a sample of University of Otago and Canterbury undergraduate students; a total of 548 students completed the survey.

The survey findings provided supporting evidence for the importance of a set of nine student satisfaction and learning effectiveness themes:

1. Teacher empathy
2. Teacher communication
3. Teacher-supplied learning material
4. Teacher involvement
5. Teacher learning support
6. Textbook support
7. Peer support
8. Physical learning space
9. General learning environment

While all nine themes were given high importance by the surveyed students, statistically significant differences existed in the themes' relative importance. In particular, teacher-based themes (i.e., teacher empathy, teacher communication, teaching-supplied learning material, teacher involvement, teacher learning support) rated higher than non-teacher factors (i.e., textbook support, peer support, physical learning space, and the general learning environment).

It was also found that gender, student major, and the university attended influenced the ratings students provided. Female students, accounting majors, and Otago students rated the nine themes higher than male students, non-accounting majors, and Canterbury students. In general, the correlations between the nine student satisfaction and learning effectiveness themes and students' learning styles and learning approaches were found to be insignificant and/or having very low associations. At the subgroup level, however, statistically significant and moderate differences between the two groups were uncovered. Female students, both accounting and non-accounting, were found to have significant positive correlations between the nine themes and their learning styles and learning approaches, while a general lack of association was observed for males.

Practical applications resulting from findings

The study's findings have practical applications for the teaching of accounting and the design of accounting, finance, and, more generally, business education research. Three of these are highlighted below

- Teachers who aspire to improve their teaching effectiveness can use the study's nine student satisfaction and learning effectiveness themes to guide their endeavours. As shown in this report, the nine themes offer a comprehensive and reliable representation of the factors that influence students' satisfaction and learning. While these nine themes can, in their present generalised state, offer educators guidance on what is needed to improve their teaching effectiveness, the authors are presently engaged in a further research project that seeks to unpack and more explicitly detail the specific actions an educator needs to perform relative to the nine themes. The authors are presently creating a Toolkit for this purpose.

- Educators can use the nine themes to assess changes they may implement in their learning and teaching methods, activities, assessments, etc. For example, an educator's introduction of, say, a business simulation learning activity can be evaluated using the nine themes, or a subset if one or more themes are not relevant to the innovation.

- The third implication relates to researchers. In particular, those researchers who wish to study student satisfaction and/or learning effectiveness can use these nine themes to operationalise these variables. At present, business education research typically defaults to using one overarching, self-reported measure of student satisfaction or learning effectiveness. The nine themes uncovered in this report offer the researcher the richer opportunity to view and measure student satisfaction and learning effectiveness in a multidimensional manner.

Abstract

Purpose – We aim to facilitate improvements by accounting and finance academics in their individual and collective use of the method of lectures and the technique of lecturing, and so improve their proficiency and effectiveness as lecturers.

Approach – The work performed so far has involved participant-observation, reviews of the literature, analysis of student evaluation of teaching data, focus groups, written questionnaires and the dialectics involved in working as a team and writing manuscripts.

Findings – We have surfaced matters of lectures and lecturing, discipline, learning environment, academic characteristics and perspectives, student characteristics, perspectives, styles and approaches, and effectiveness of learning. Our review of these is provided in this report.

Implications – The method of lectures and the technique of lecturing is ascendant in the discipline-centred teaching orientation of accounting and finance education. Improvements in the use of this method on courses academics design and stage, and the use of this technique in classes they teach should enhance the learning these academics help their students realise, and so provide long-term benefits for graduates and society.

Limitations – The study is based on students' perceptions of factors that affect their satisfaction and learning effectiveness from only two universities, both situated in New Zealand. Whether the study's findings can generalise to the population of tertiary accounting and finance students in New Zealand and beyond remains unknown. However, such a question is amenable to empirical testing and future research could be directed to helping provide an answer to this question.

Originality – This study is the first to examine accounting and finance students' perceptions of what contributes to their learning satisfaction and effectiveness. A further original contribution is the holistic approach used to study the subject matter.

Keywords: lecturing, learning, accounting education, discipline qualities, participant characteristics, teaching improvement interventions

Introduction

This report provides progress of a study through which we aim to raise the consciousness of accounting and finance academics about the method of lectures and the technique of lecturing.[1] We envisage that achieving this aim will enable these academics to improve their proficiency and effectiveness as lecturers,[2] given the prevalence among them of using this method on courses they design and stage, and using this technique in classes they teach (see Figure 1 for possible methods of formally structured sessions or classes). In turn, these improvements should enhance the learning these academics help their students realise, and so provide long-term benefits for graduates and society.

The desirability of such raising of consciousness and improving of proficiency and effectiveness was motivated by student satisfaction scores that included accounting and finance academics. The scores occurred in student evaluation of teaching (SET) (or student ratings of instructors) type surveys in our two universities (see University of Canterbury, 2016) and in two entire higher education jurisdictions

Figure 1. Forms of Classes constituting a Spectrum of Teaching Methods and Techniques

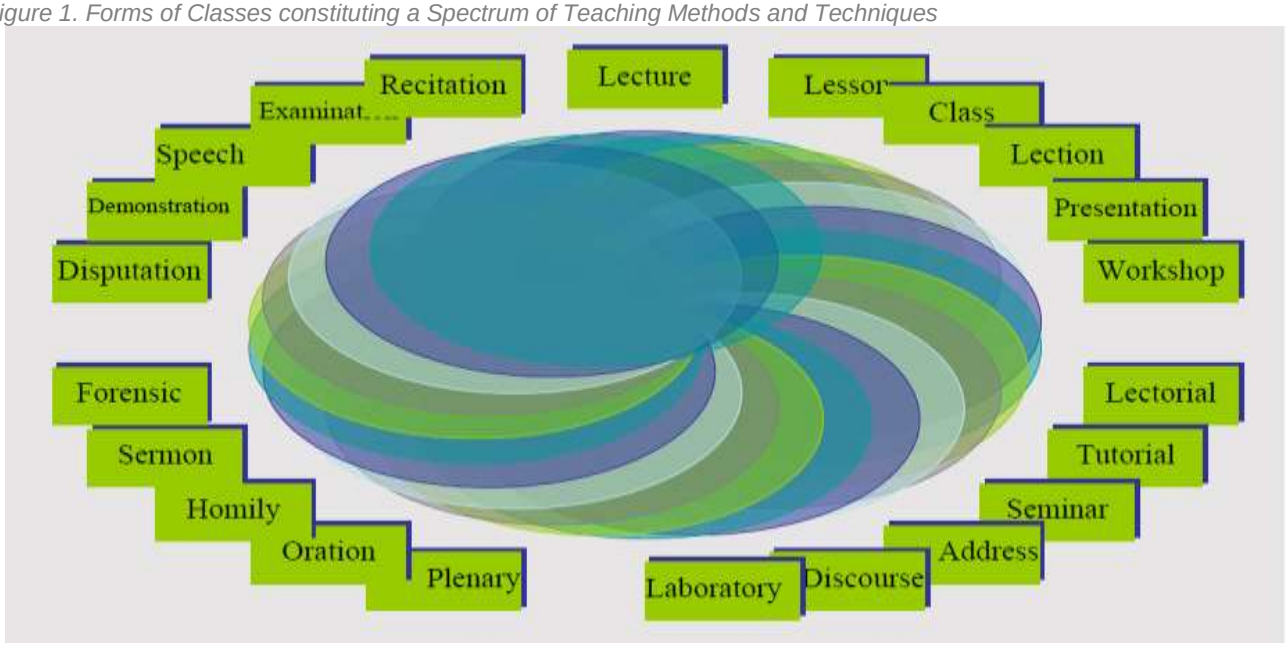


Figure 1. An array of names for "classes" in the sense of students gathering together, usually in one place (or virtual place, perhaps) at the same time (or in some cases at times in close proximity) to be taught about a subject, usually by one tutor or sometimes a team of tutors (who can be referred to as professors, readers, lecturers, teachers, instructors, tutors, learning facilitators, etc.), ostensibly in order to learn about the subject. Classes are usually arranged in a series within a set period (e.g., term, semester) to form a course (or unit), although some can be single events. Mostly, the students are aspiring to a degree or similar qualification and courses count for credit towards these. The Figure was developed for this project.

elsewhere; that is, the National Student Satisfaction Survey (see Higher Education Funding Council for England, 2015) and the Australian Graduate Survey (see Graduate Careers Australia, 2015). Relative to

[1] For clarification of distinction between method and technique, see Verner and Dickinson (1967).
[2] Although we use the word lecturer here and on over 100 other occasions in this paper, more often we use the word teacher to refer to these same people—on over 200 occasions in fact—appreciating that the word teacher infers a wider set of responsibilities than only staging lectures. However, we are also aware that in universities the word teacher sometimes construes inferiority, compared to lecturer; this is not our intention in any way.

academics in many other academic disciplines, the scores for accounting and finance seemed generally lower (e.g., EducationGuardian.co.uk Students, 2011; Edwards, Coates, Guthrie, and Nesteroff, 2008).

The emphasis in this report is on what accounting and other business students opine as being important for their learning achievement and their satisfaction with the learning they experience. Teachers' behaviours and related aspects of their courses are complemented by an understanding of student learning styles and student learning approaches (Duff & McKinstry, 2007). For the purposes of this report, learning is perceived as both a product and a process. Learning involves the acquisition of knowledge, skills, meanings, beliefs and values through activities, reflections and other processes experienced by the learner (Bruce, 2001). Attempts are often made to give learning some tangibility by expressing it in terms of learning outcomes (for a partisan review, see Allan, 1996). As this report proceeds to reveal, there are no "quick fixes".

This report focuses on the effectiveness of lectures and the proficiency with which lecturing is prepared for and performed, and on teaching improvement interventions associated with these matters. Indeed, mostly the report focuses on lecturing effectiveness from two perspectives: those of academics and those of students. The participant-observer focus used in this research is consistent with capitalising on the roles the researchers execute each day as part of their jobs as educators and researchers in the Department of Accountancy and Finance at the University of Otago and the Department of Accounting and Information Systems at the University of Canterbury. It is also consistent with stretching our limited resources to the greatest effect, considering the following tenets: that teacher presentations have a significant influence on satisfaction scores (e.g., see Kreuze & Newell, 1987[3]); that lectures play the central role in most courses taught by accounting and finance academics in New Zealand and many other universities worldwide (e.g., Adler, Milne & Stringer, 2000; Ballantyne, Bain & Packer, 1999; Brown & Guilding, 1993; Marriott & Marriott, 2003; May, Windal & Sylvestre, 1995); and that lectures are institutionalised in New Zealand universities, dating back to institutions' establishment (Adler et al., 2000; Gardner, Beardsley & Carter, 1973).

Our two institutions were instrumental in setting up the University of New Zealand, from which the present arrangement of eight universities has evolved (Gardner et al., 1973). However, this did not occur until 1873, by when lectures were ascendant at the universities elsewhere (i.e., in universities in England and Scotland, and to lesser extents in the United States and Germany. The ascendancy of lectures at these older universities was controversial at the time, having recently taken over this position from recitations. The changeover seemingly accompanied the rise of sciences vis-à-vis the classics and arts, resulting in demonstrations (or experimental lectures), laboratories and seminars becoming more significant. Lectures enabled science (and other) professors to present material that was otherwise not sufficiently available through things we now take for granted (e.g., monographs, journals, textbooks, the Internet). Laboratories called for students to get their hands dirty with the subject matter, apply learning and engage in inductive learning, which stands in stark contrast to the earlier emphasis on memorising that was incumbent in recitations (Fuhrmann & Grasha, 1998). We mention this to raise consciousness about a substantial previous change that occurred in university learning and teaching as a way to highlight the possibility for change today.

In choosing to focus on lectures, we were concerned to pay due regard to the varying purposes lectures and lecturing might serve and the varying contexts in which these events and actions take place (e.g., see Dressel & Marcus, 1998). Thus, following Laurillard (2002), we considered their interrelationships with other aspects of the teaching: the contributions of academics, the activities students undertake (i.e., learning, assessment, living, etc.) and the outcomes for students (i.e., certification, attributes with which they graduate, consequences of success and failure, etc.). These concerns are reflected in the following questions being in our minds during the study:

- Why are episodes of teaching labelled "lectures" so predominant?

[3] See DeBerg and Wilson (1990) for a criticism of Kreuze and Newell's (1987) work that led to this finding.

- What characteristics do “lectures” have and not have, compared to the many other possibilities; what is the range of these characteristics, and how does this range give rise to variation in episodes labelled as “lectures”?
- In what ways do lectures fit into courses, modules, units or papers, and into programmes of study leading to qualifications?
- What distinguishes a lecture being excellent, very good, good, satisfactory or poor in terms of immediate effectiveness (or ineffectiveness), whether expressed in terms of graduate learning outcomes and, below those, student learning outcomes of specific courses, or constructively, being partial to the learner ?[4] What types of issues are associated with lectures that affect their effectiveness?
- What incentives and disincentives do teachers have to change their lectures, or to replace them with different methods of class and techniques used in classes? What incentives and disincentives do they have to increase teaching effectiveness and learning effectiveness? What constraints do they face, be they institutional, professional, relating to their students or personal?
- What interventions exist to increase teaching effectiveness and learning effectiveness in respect to lectures, and how effective are such interventions?

In our quest for relevant teaching improvement interventions, we have been conscious that notions of improvements are ambiguous in various ways. In particular, it is neither easy nor straightforward to pin down the notions of effectiveness of lectures and proficiency with which lecturing is prepared for and performed, nor the related ideas of teaching quality and teaching excellence, let alone demonstrating that interventions will succeed in improving these (see Gunn & Fisk, 2013; Little & Locke 2011; Little, Locke, Parker & Richardson, 2007). Thus, in an attempt to simplify matters, we have taken certain viewpoints about proficiency and effectiveness. We see proficiency in accounting and finance teaching as being about competence, adeptness and skill in performing as a teacher, and see the technique, or carrying out the process, of lecturing as a significant facet of this proficiency. We see effectiveness as deriving from how and why the general attributes of lecturing techniques are applied; effectiveness equates to the ability to put into effect one’s proficiency, and so cause or possibilitate student participation in learning, with the result that they achieve highly.

Regarding indicators of effectiveness, we see student pass rates, grades and similar measures of student cognitive and affective abilities, immediately and in the longer term, as important. We also see SET scores as being significant operationally, even though it is questionable whether SET scores and student grades and learning achievements necessarily correlate (e.g., compare Bean & Bradley, 1986, with Yunker & Yunker, 2003, 2006), let alone whether it is possible to identify reasons for them doing so (Crumbley & Fliedner, 2002; Feldman, 1998), or indeed whether the way students are apt to define lecturing effectiveness—that is, by how well lecturers communicate with students, most particularly in explaining concepts[5] (Byrne & Flood, 2003)—is adequate. The point is that it is naïve to think of SET scores being immaterial to the academics at which our work is aimed: most give some attention to improving these scores, and not only because they figure prominently in the managerialist approaches to organisational control that have gripped their higher education workplaces in the past few decades (Arthur, 2009; Deem, Hillyard & Reed, 2007; Knight & Trowler, 2000; Lawrence & Sharma, 2002). In any case, that a direct correlation exists between student satisfaction and retaining students is in less doubt (see Tinto, 1993), because for student learning to occur students must first be retained; we appreciate,

[4] Applied learning outcomes can be used to distinguish different levels of study of students within a programme, and of the programme graduates. This concept underlies several qualifications frameworks that have emerged in various parts of the world in recent decades (e.g. New Zealand National Qualifications Framework (NZNQF) as per New Zealand Qualifications Authority (NZQA), 2005).

[5] As Donald(1983, 1986) shows, the role of concepts, or things conceived in the mind, is ascendant in learning in every discipline (see also Hativa, 1995). A concept amounts to mental representation of information, so that it is, or can be, organised and categorised, and named. Concepts enable thinking to be clarified and made steady; they open up possibilities of reason and understanding (see also Berkeley, 1874).

however, that even that view can have perverse implications (see Crumbley, Flinn & Reichelt, 2012). Thus, we believe that the quests for higher levels of student satisfaction and for higher achievements in student learning are both worthwhile, and are not unconnected either to each other or to lectures and lecturing.

We indicated above that we had interpreted SET scores as revealing teaching weaknesses among accounting and finance academics compared with academics generally. We should point out however that, as a review by Laughlin (2014) shows, it is widely recognised that SET scores differ among academic disciplines (or academic fields); moreover, in the few studies we have found in which the accounting and finance disciplines are included, they are among the disciplines for which scores are lowest (Hoyt & Lee, 2002; Laughlin, 2014). The reasons for the differences between disciplines are unclear, despite a copious literature on the phenomena (e.g., Barnes & Barnes, 1993; Benton & Cashin, 2014; Braskamp & Ory, 1994; Cashin, 1990a, 1990b; Centra, 1993, 2009; Child, 2011; Feldman, 1978; Kember & Leung, 2011; Marsh & Dunkin, 1992; Neumann, 2001; Sixbury & Cashin, 1995; Smith & Cranton, 1992), and it is possible that many of the reasons are to do with biases[6] or factors similarly beyond the control, severally or even jointly, of academics in a particular discipline or field. Thus, as the Code of Practice for using data from the Australian Graduate Survey states, "in many cases it is inappropriate to make . . . inter-field comparisons" (Graduate Careers Australia, 2010, p. 6). Even so, we stuck to our aim and continued to carry out our work, despite the questionable premise on which it is founded. Indeed, given the accounting literature being silent on the matter, we have tried to illuminate the reasons for accounting and finance being among lower scoring disciplines.

In focusing on issues related to curriculum or pedagogy, the accounting education literature abounds with cases and descriptive articles offering valuable ideas, information and advice to accounting educators about effective teaching. However, in opining on its quality Watson, Apostolou, Hassell and Webber (2007, p. 22) claim that "year after year, these articles are mostly descriptive or short-term studies offering no empirical evidence of effectiveness." They call for more studies that evaluate the educational effectiveness of different curriculum models and teaching approaches, and so provide evidence about how successful these offerings might be. Similarly, Kerr and Smith (2003a, 2003b) point to a need to identify and understand the characteristics of effective teaching.

We have taken note of these opinions in our approach and methods, the depth of our work and the evaluation it provides. And so, with a view to providing teaching improvement interventions suited to accounting and finance academics, our work investigates such concepts as proficiency and effectiveness and interrelationships between them and a host of other matters. These matters include institutional, disciplinary and societal factors, which may not be within any given lecturer's control, or indeed may be outside the control, agency or influence of the collection of lecturers/academics and associated support staff who work on particular coherent programmes. The programmes we have in mind are those taken by students aspiring to an accounting bachelor or taught master degree, or membership of a professional accounting body; or by students seeking to acquire accounting knowledge that is suitable to or appropriate for other purposes. In putting forward teaching improvement interventions that seem compatible with the accounting and finance disciplines and the education associated with them, we try to provide evidence about their potential success and limitations. We also delve into ways to get academics to act on the evidence, and so bring about greater proficiency and increased effectiveness among the academics in question, not just individually but as communities of practice in departments or less formal units with business schools and across cooperating universities.

The rest of the report presents the work we have carried out so far and is organised as follows. In Section 2 (hereafter S2, etc.), we relate methods used in the study to gather, analyse and interpret data and other empirical materials and to report our research. S3 takes the form of a review of our findings; it starts with matters raised in S1 and elaborates them, folding and blending the many strands in the extant accounting and finance, education and other literatures, and the empirical materials we collected, as reported in S2,

[6] Bias has been defined as "when a student, teacher, or course characteristic affects the evaluations made, either positively or negatively but is unrelated to any criteria of good teaching, such as increased student learning" (Centra, 2003, p . 350 quoted in Kember & Leung, 2011).

all in the context of our study aims and questions. S5 comprises our conclusions so far and the further research in which we are presently engaged.

Research Methods

We have used a mixed-methods approach. The study arose from and has benefited throughout from our participant-observing as an extension of our work as teaching academics, accounting and accounting education researchers, and accounting department and accounting programme administrators. Throughout the study proper we have reviewed and evaluated literature. We analysed all SET scores published by the University of Canterbury for courses from 2010 to 2015 (see University of Canterbury, 2016). We conducted two formal exercises to gather data from students; the first comprised focus groups and the second, written questionnaires, and were done one after the other, with the first informing the second. Each of these methods is outlined below, with indications of ways we mixed them, thus bringing out the complementarity and expansion we sought from comparing and contrasting the findings from each (see Bryman, 2006 on these rationales of mixed methods).

Participant-Observation

Our participant-observation included the experience (and baggage) we brought with us and the interests and concerns we had that sparked the study. These concerns were about lectures we and our colleagues give, and about the students listed on the roll as members of the audience: Why is attendance at lectures falling? Are lectures an effective method compared with other forms of class? Why are some lectures better than others? Why are SET scores lower for accounting lecturers and the courses their lectures are part of than is the case for other disciplines?

Our participant-observation has been ever-present during the study. For 24 weeks or so each year, we are teaching classes; in that time and for a few more weeks, we are assessing students formatively and summatively, and dealing with them academically and pastorally. For all that time and for what many members of the general public (and some students) refer to as holidays, we are working alongside, conversing, and generally interacting with educators and researchers in our discipline and other disciplines, and with administrators, leaders of our institutions and external parties, including for research purposes.

Literature Review

We began the study proper by working through literature on accounting education in particular and higher education more generally, and reflecting between this literature and our participant-observation. Our focus was on lectures and lecturing, including the wider teaching and learning situations in which they occur. As the study progressed, the literature we visited expanded in volume and scope, following, renewing and informing our other study activities. As we wrote this report, we made choices of which literature to include according to its relevance to the main issues of our subject and overall aim.

Focus groups

A series of eight focus groups were undertaken with undergraduate students attending the University of Otago in semester 1 of 2015 (i.e., February to June). We envisaged that these focus groups would add to our understanding of what we had uncovered in the literature about the types of factors that other researchers, mainly in North America, have associated with satisfactory learning experiences for students, and then given rise to greater learning effectiveness among students.

We started from the position that the body of undergraduate business students comprises heterogeneous persons. However, for the focus groups, we tried to group students so as to have less heterogeneity/more homogeneity within groups. In order to achieve this, we used three differentiators that our experience led us to believe would influence student experiences and their corresponding beliefs about factors associated with their learning satisfaction and effectiveness. The three differentiators were by student year of study (first year—subsequent year), by major (accounting or finance—another business major),

and by ethno-culture origin (*tangata whenua*[7]*—tangata tiriti*[8]— international[9] students). Using the two/three sides of each of these differentiators as strata, we identified a random, stratified sample from the entire body of the students in question and invited the names in the sample to volunteer to take part in the focus groups. This resulted in 43 students attending the session of the focus group to which we allocated them using the differentiators, there being eight focus groups in all, as shown in Table 1.

Table 1. Summary of Focus Group Participants

Number of Students	Year of Study	Major	Origin	Session Length
19	1	1, 2	Tangata tiriti (a mix of Pākehā and Asians) and Tangata whenua (Māori), International (country of origin: Britain)	40 minutes
10	1	1, 2	Pākehā, Māori, International (countries of origin: New Caledonia, Maldives)	30 minutes
4	1	1, 2	Māori, Pasifika	20 minutes
3	1	1	International (countries of origin: China, United States)	20 minutes
7	1	1	Pākehā	25 minutes
6	1	2	Māori, International (countries of origin: China, Japan, Philippines)	20 minutes
2	1	1	Pasifika	20 minutes
2	1	2	Māori	20 minutes
2	1	2	Pākehā	30 minutes
1	2	1	Māori	15 minutes
2	2	2	Māori	20 minutes
2	2	2	International (countries of origin: Britain, Germany)	20 minutes
1	3	2	Māori	15 minutes
2	3	2	Pākehā	20 minutes
1	3	2	International (Country of origin: China)	15 minutes

Majors are identified as 1 = Accounting, 2 = Finance, Marketing, Management, International business, Economics or Law.

The sessions were conducted in autumn 2015; they varied slightly in duration, as indicated in Table 1, and in what occurred. All, however, involved the participants writing down on A1 paper, either singly or as part of a 2, 3 or 4 person group, their views on three questions, and afterwards displaying, and so sharing, them in the session room. The questions were:

[7] *Tangata whenua* are indigenous people of the land (i.e., Aotearoa New Zealand), widely described as Māori.

[8] *Tangata tiriti* are settlers and their descendants whose rights to be in New Zealand derive from the Tiriti (or Treaty) of Waitangi 1840; they are sometimes called non-Māori; their ancestors trace to the Pacific (known as Pasifika), Asia (people from eastern Asia, including from Mongolia, China, Japan, Indo-China and the Philippines are usually referred to as Asians; those from the rest of Asia normally are asociated with their country or region of origin within Asia), North and South America, Europe (known as Pākehā) and Africa.

[9] International students are people who are neither citizens of New Zealand or holders of permanent resident visas; they pay a higher fee than citizen or permanent resident students (known as domestic students) do

1. What facilitated a satisfying learning outcome?
2. What contributed to effective student learning outcomes?
3. How has the environment contributed to their learning effectiveness?

These sheets and associated data from the focus groups were analysed using a software package for identifying themes from qualitative data such as were generated by our focus groups (see SAS® Enterprise Data Miner, 2012). The analysis of these data is incorporated in S3. However, we used the principal finding to develop the survey described in S2.4, and so it is appropriate to report that finding here. This finding was of nine themes emerging, as listed in alphabetical order of summary description (see Table 2). Moreover, these nine were consistent with the literature we had reviewed at that time, albeit with additions relating to the physical learning space and the general learning environment.

Table 2. Summary of the Nine Themes associated with Student Learning Satisfaction

Theme A	**General environment.** The lecture is not interrupted by outside noise, short walking distance between subsequent classes, convenient timetable for classes and tutorials.
Theme B	**Peer support**. Discussion amongst students, smaller groups for study, equal contribution from participants.
Theme C	**Physical learning space**. The room is at a suitable temperature, has comfortable furniture, there is adequate lighting, has a good sound system, is clean and tidy, and has good Wi-Fi available.
Theme D	**Teacher communication**. The lecturer speaks clearly, explains content well, speaks at an easy to follow pace, speaks without a monotone, uses clear explanations and definitions and sticks to the topic.
Theme E	**Teacher empathy**. Shows respect to students, helps students feel comfortable to ask questions, genuinely cares about learning, and ensures good class understanding before moving to new material.
Theme F	**Teacher involvement**. There is good interaction between the class and the lecturer, the lecturer is enthusiastic about the subject, and the lecturer makes going to class interesting.
Theme G	**Teacher learning support**. Relevant lecture materials are available before class, the lecturer is accessible outside of class, and there are relevant examples to work through after class.
Theme H	**Teacher-provided learning material**. The lecturer makes lecture slides available on blackboard before class, provides podcasts, uses lecture slides to introduce, present and summarise lecture material.
Theme I	**Textbook support**. Textbooks complement other learning material, they provide further detail on lecture topics, end-of-chapter questions can be used to check learning, textbooks related well to the lecture.

Written Questionnaire Survey

We used this survey to elicit more information about the characteristics and perspectives of students who attend lectures in accounting and finance, and these students' opinions about lectures and related aspects of their experiences as students. The survey was carried out among business undergraduates at the University of Otago and the University of Canterbury in Semester 2 of 2015. Two survey instruments were used in both settings. Both instruments included the same items on demographics (i.e., gender, age, major subject, year of study, ethnicity, English as a first language, accommodation, employment and hours in paid employment) and learning satisfaction. In one, we included a list of items associated with learning styles, and in the other we included a list of items associated with learning approaches. The two questionnaires are provided in Appendix A.

The learning satisfaction items, 35 in all, were based predominantly on the themes identified in the focus group sessions; we used multiple items to measure each theme (Nunnally, 1978). We took account of the support for the themes in the literature we had reviewed before, during and immediately after the focus groups in deciding to delve further into these themes and the items to us. The incorporation of items on learning styles and learning approaches were intended to take our inquiries a bit further. The source of our learning styles items, 40 in all, was Honey and Mumford (1992), and that of our learning approaches items, 20 in all, was Biggs, Kember and Leung (2001). We chose to use two questionnaires in order to keep the instrument that each respondent would complete to a reasonable length.

Students were surveyed at both universities in similar ways. A total of 298 students completed the survey at Otago and a total of 250 students completed the survey at Canterbury. At Otago, the students were identified from two representative courses in the business degree core,[10] one covering marketing and the other accounting. Both courses are mostly taken in a student's first year of study; after them, the students can major in several options within the business degree, including accounting, finance, etc. At Canterbury, four courses were chosen, including the equivalent course to that at Otago in accounting, and three others that were primarily for aspiring accountants, although students specialising in other majors and non-business degrees do take them. Normally, the three others would be taken at first year, second year and third year, respectively.

Initially, students on the two courses at Otago were surveyed during lectures by one or both researchers based at the university, neither of whom was directly involved in staging or teaching either course. The students were advised of the research aims and informed that their participation was voluntary, with no reward or penalty attached to their completion or non-completion of the survey, other than the possibility that the research might inform and improve teaching and learning practice. The two questionnaires were distributed alternately. Nearly all the students present at class completed the survey. The number of students formally enrolled on each course exceeded 400. However, the numbers attending the two lectures when the survey was administered was only about 30% of those enrolled. To increase participation and response rate as a proportion of enrolled students, an on-line version of the survey was created for absent students and they were invited to participate.

At Canterbury, one or other of the researchers was involved in three of the four courses but was not involved in administering the questionnaires. This administering was done at one lecture on each course. Participants were given similar advice and information to that given to the participants at Otago and, again, the two questionnaires were distributed alternately. Nearly all the students present at class completed the survey, and the 250 responses (out of 771 enrolments) seemed enough not to need an online version.[11]

We tested for differences in the demographic information provided by the Otago students completing the in-class and on-line versions of the survey to determine if the two groups were significantly different. No statistical differences were observed. This finding led us to conclude that it was appropriate to combine the data. We also used these data to test for a non-response bias; in particular, we treated the on-line respondents as surrogates for non-respondents (Miller & Smith, 1983). We found no differences, and so concluded there was no non-response bias.

We have provide an analysis of the salient demographic characteristics about the students who responded to the survey in Appendix B. The main demographic differences we noticed between the two sets of respondents were that the Canterbury respondents comprised fewer females, fewer who dwelt in university halls of residence, and fewer who were not working in paid employment than the Otago respondents. We are unsure why the first difference arises. The other two differences correspond, among other things, to Otago's greater focus on a full-time, first-year residential life for non-local students.

Writing this Report

The structure of this report varies from the typical approach featuring quantitative methods following a functionalist ontology and epistemology (i.e., introduction of the research problem, literature review and hypotheses, methodology (sic), data analysis/findings/results, acceptance or rejection of hypotheses, conclusions). Instead, S3 comprises our analysis and interpretation of the data and other empirical materials accumulated using the mixed methods enumerated in S2.1 to S2.4. Throughout the

[10] Core means that all students seeking a business degree must pass them regardless of the major in which they graduate.

[11] The responses and enrolments of each course were 56 and 266 (first year, accounting, business core), 37 and 128 (first year, accountant specialist), 100 and 221 (second year, accountant specialist), and 57 and 156 (third year, accountant specialist). The totals are 250 and 771.

presentation of this analysis, we fold and blend the many strands of the extant accounting and finance, education and other literatures into our interpretations of the findings.

Review of Findings

In S1 we refer to several matters (for want of a better word) as being particularly relevant to our research topic; that is, the proficiency with which lecturing is done and the effectiveness of lectures in terms of student learning. To aid the reader, we have arrayed the matters in question in the diagram shown in Figure 2. We derived these matters from the literature reviews we conducted at various stages of our study and used them to guide this series of reviews and the empirical and analytical parts of our study.[12]

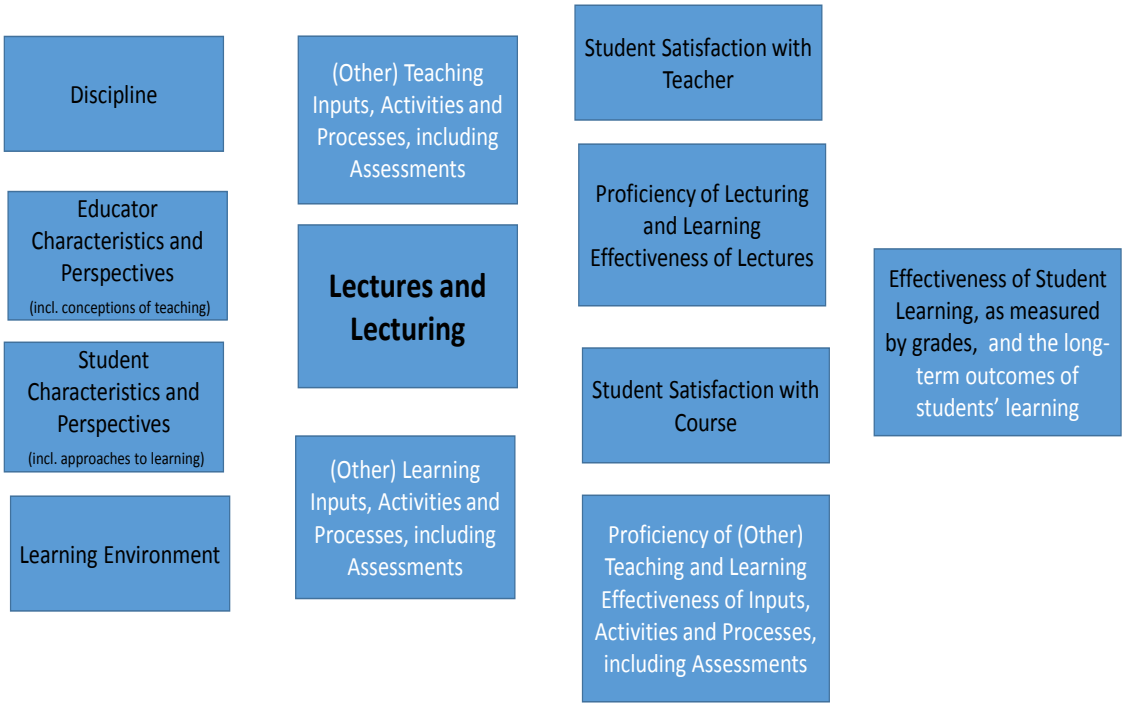
Most people involved in teaching students at university will appreciate that the matters in Figure 2 are related. Although we initially tried including lines on the diagram to depict various relationships, we realised that to include only a small enough number for the diagram to remain uncluttered risks being satisfied with what might turn out to be somewhat shallow inferences, such as that their relationship is essentially linear and goes from the matters on the left to the matters on the right.[13] In contrast, we identified various clusters of literature to bring out the many ways they can be interrelated, although mostly this is at the piecemeal level rather than wholistically. The purpose of this section is to use that literature and our data to elaborate the interrelationships to which we have just referred, and try to synthesise the matters into a coherent whole, and from there go on to discuss issues and interventions.

[12] We provide a summary of some of the studies we reviewed in Appendix D.

[13] We are not saying that such a relationship is not implausible, and so investigations along those lines (e.g., Kember, McNaught, Chong, Lam & Cheng, 2010) are not invalid; we are saying that we expect there are other relationships, and so do not want to exclude them by the way we draw the diagram. Incidentally, Kember et al.'s diagram of the influences' relationships they investigated, within an overall concern for the impact of conceptions of teaching on teaching and learning, is shown in Figure 3.

Figure 3. Impact of conceptions of teaching on teaching and learning (Source: Kember et al., 2010, p. 1184)

Figure 2. Array of Concepts and other Matters around Lectures and Learning (developed for this project)



The rest of this section has eight sub-sections. S3.1 is a descriptive analysis of lectures and lecturing, which is in the box left centre of the diagram in Figure 2; incidental remarks are made about the boxes above and below it in the diagram. In essence, we consider the lecture as a narrative medium and outline its essential elements and variations on these, bringing out links to other media for learning and teaching among participants in these processes. After that, we consider in turn the four matters in the boxes on the left of the diagram, before moving rightwards, to synthesise the whole diagram.

The matters on the left of the diagram correspond greatly with what Fincher (1998) describes as the major factors within the learning situation; we consider each matter in turn. S3.2 is a discussion concerning disciplines, classifications of disciplines and the accounting and finance disciplines. We deliberate links between disciplines in general and the accounting and finance disciplines in particular and the other three matters, and we fold in findings from the analysis of SET scores (see S2.3). S3.3 is a discussion concerning the learning environment: we explore how various aspects of that environment (e.g., the size of classes, the use of technology, the level of interaction, the degree of civility) influence educators' ability to deliver and the students' ability to learn in the classroom. S3.4 considers coming to an understanding about students: the literature we draw on is mainly concerned with student characteristics, perceptions and perspectives that may enhance or impede lecturing effectiveness and student learning, and we fold findings from the focus groups (see S2.4) and written questionnaire survey (see S2.5) into our discussion. S3.5 examines educator characteristics and perspectives (e.g. personality, attitude towards students, style of teaching, relationship between teaching work and research work, etc.): the literature we draw on is mainly concerned with the characteristics of educators that students prefer or dislike.

In S3.6, we synthesise the earlier sections, discussing the interrelationships among matters covered in them, particularly how matters on the left of the diagram influence lectures and lecturing; and how these interrelationships influence the lecturing proficiency of academics, the effectiveness of the lectures they stage, student satisfaction with lectures, teaching and courses, and effectiveness of student learning. In S3.7, we set out the key points in the review as far as our empirical work, analysis and evaluation are concerned. In S3.8, we consider teaching improvement interventions to support changes that our work

identifies, and discuss bringing about change among academics in the context of what is possible institutionally.

Lectures and Lecturing

A lecture is a form of class in which the person with authority to stage, conduct and keep the class in order, the lecturer, presents or utters, for the purpose of instruction or learning and information, a (usually, carefully prepared) discourse on the topic of the lecture before an audience of students or learners attending the lecture. Mostly, the lecturer is positioned at the front of the audience, whose individualised members are in turn sitting in row-by-column theatre formation, all very much facing the lecturer and not each other.[14] This is the layout whether the rooms are of a general-purpose nature, and so flat, or are purpose-built for lectures (lecture theatres or lecture halls), in which case they usually slope upwards away from the lecturer through the audience. The audience members are expected to listen, take notes and otherwise absorb individually, unless invited to confer with each other or enter a discussion with the lecturer and the rest of the class. Usually, this absorbing is with the prospect in mind that the topic is assessable in some future episode of assessment (e.g., an exam), and act civilly, sometimes perhaps to the point of supplicancy. The action of lecturing refers to those activities performed by the lecturer, mainly comprising discoursing, presenting, or making a speech, with qualities of structure and clarity, complemented perhaps with visual aids, pre-prepared (e.g., PowerPoint slides) or otherwise (e.g., with writing on a white board or on paper or transparencies and responding to questions invited from the students (see Devlin, 2010).

Indeed, lectures as a method often incorporate other sorts of interactions with the audience, or members of it, whether through oral exchanges of student to lecturer and of student-to-student, or through students completing written work. This follows from the idea that learning is related to the style of teaching and delivery. A noteworthy sort of such interactions is the conveying of course, study and assessment information. For example, as is sometimes expected by students, the lecturer may communicate about the learning outcomes he or she envisages for the topic of the lecture, in an attempt to express expectations about student achievement, including the core subject-based outcomes, personal transferable outcomes, and generic academic outcomes (Allan, 1996; Handal, Wood and Muchatuta, 2011).[15] The lecturer can try to reduce the intimidation arising from formality by incorporating some interaction within the audience almost akin to group work, with the lecturer moving between groups, and so supporting a fun and more thought-provoking learning environment (Aquino & Vermette, 2013).
Being time-limited, lectures invariably involve a schedule, which might include breaks, changes in topic or nature of utterances (e.g., from learning materials to information) and changes in audience activities. Other aspects of a lecture include the (social) atmosphere in the lecture room, the demeanour of the lecturer to the audience and members of it, and vice versa, the quality of the delivery by the lecturer to the audience, and all that is conveyed reiteratively between students and the lecturer, including other than by words (Hativa, 1995; Lynch, 2011; Verner & Dickinson, 1967; Waugh & Waugh, 1999; Weaver & Qi, 2005).

In their study, Wygal, Watty and Stout (2014) use teaching effectiveness to refer to both learning environment and educator characteristics and perspectives. Teaching ability, clear instructional presentation and dynamic delivery, student behaviour management, intellectual excitement, stimulating teaching, ability to challenge students, applied knowledge, clear communication, subject design, organisation, disciplinary knowledge, ability to convey knowledge, fairness, facilitating independent

[14] This approach can be contrasted to a classroom configuration in which students are seated around tables, as if attending a night club cabaret a banquet, and are convenient to a stage or similar performing area.

[15] A scheme of learning outcomes can embody the knowledge and skills that students are expected to demonstrate, as well as the process and activities in which they should engage (Centre for Outcomes-Based Education, 2007). It can be the cause of how teachers facilitate learning and its demonstration, in roles of lecturer and tutor *cum* assessor. In the workplaces we are used to, the person(s) who designs and stages a course most often is the (internal) examiner as well, and so designs and administers summative assessments, and determines or recommends students' results.

learning, provision of appropriate assessment and feedback are all identified as important to teaching effectiveness. The study further finds that openness to students, a caring attitude, and respect for students, enthusiasm, approachability and friendliness are also important and relevant. Together these studies suggest that a teacher's attitude is significantly related to student satisfaction with their learning experience.

In our workplaces, by far the majority of audiences comprise undergraduates (i.e., students aspiring to a bachelor degree, a significant proportion in accounting and/or finance). The courses they study include formal classes staged according to a weekly timetable. Officially, the classes are categorised mostly as lectures, tutorials or laboratories. While those designated as lectures can in practice take on other forms of class, as displayed in Figure 1, the descriptions above would be adequate for describing most. Except that variations arise, ranging across issues of the purposes that lectures serve, the size and shape of the rooms (or theatres), the audience size and composition, the roles of the lecturer, the audience and its members, the structure, formality, capture, civility and incivility characterising the class, the adequacy of what transpires from the points of view of those involved, and the events before and after, including what the lecturer and students have done to prepare for the lecture.[16] Some of these variations are part of the original design of the lecture or series of lectures; others arise in response to how the series of lectures is going; and still others arise during a lecture, in accordance with the things occurring that were considered possible but not probable (e.g., students exhibiting greater or lesser understanding than was expected or experienced previously by the lecturer), or were not expected at all (e.g., same but with the lecturer unprepared for such possibilities; an earthquake).

Studies of Lectures in the Accounting Literature

The coverage given to lectures *per se* in the accounting education literature is scant. This is surprising in light of the fact that lecturing is:

- the dominant teaching orientation in accounting (see in particular Dressel and Marcus, 1998, and their characterisation of discipline-centred teaching;[17]
- the traditional or conventional teaching approach (e.g., see Ballantine Guo & Larres, 2016; Friedlan, 1995) being comprised of
    - lectures, either conceived separately or as a series, planned according to a fixed schedule or pace, and covering facts, methods, concepts and technical material, which are rigidly defined and well-documented in functionally-oriented textbooks,
    - tutorials and self-study, to back the lectures or the lecture topics, and primarily involving exercises, problems and similar tasks that are procedural in nature, usually taken from the aforementioned textbooks, and
- the basis for the majority of student assessment, whereby students sit invigilated, time-limited tests and examinations featuring similar exercises and problems, with some define, describe and explain questions, all predominantly requiring preset answers (Adler & Milne, 1997a, 1997b; Ainsworth, 2001; Ballantine et al., 2016; Palm & Bisman, 2010).[18]

[16] This variation between lecturers is exemplified in the alternatives set out in Appendix C prepared by two of the researchers, separately and independently, early in the study. They were prepared when we realised how diverse our views were, not only in matters of how to prepare for, present and reflect on a lecture but also in wider matters of context.

[17] For a study of conceptions of teaching in accounting, and of conceptions of learning in accounting, corresponding to Dressel and Marcus (1998), see Leveson (2004). Discipline-centred teaching seems to accord with Leveson's Level A category of conceptions of teaching, and her Levels A and B categories of conceptions of learning.

[18] As a corollary to this approach, Hoyt and Lee (2002, pp. 8–9) found that the most prominent aspect of accounting classes and course content compared to other disciplines was their structured nature; accounting teachers faced their greatest challenges in stimulating interest and eliciting student involvement. For their part, students found the accounting classes and activities such as reading and non-reading as demanding, and the courses as a significant intellectual challenge. The most important objectives were basic cognitive objectives, related to factual knowledge, principles and theories, followed

A notable exception to the scanty coverage is Cunningham (2011). She provides an overview of what she refers to as the day-to-day considerations, which for many academics may fall either within Schuetz's "taken-for-granted" (1951, p. 166 – see above) or what we sometimes hear others saying as "being too complicated" or "getting carried away" or "not my problem".[19] She uses the analogy of theatre and tours behind-the-scenes of a large-lecture, introductory accounting course, the emphasis being on the *course* (of lectures, tutorials, study, etc.), rather than only the single *lecture*. She divides matters into pre-production, the production and the reception by critics, and develops these in relation to the many roles of the teacher (e.g., director, producer, various crew roles, casting actor). Matters covered in pre-production, which are not too far from our Rough Guide II in Appendix C, are in the following order:

- understanding the audience, particularly the needs of students for a meaningful experience
- developing a vision for the course, including strategies to help students learn cognitively and affectively, and to engage them, and a schedule of events
- identifying resources and financing needs, particularly around cast, crew, set and production elements
- determining the cast and crew, including other academics and casual tutors
- designing the set, which usually involves making the best of what a lecturer is allocated or given to work with, particularly rooms, the "virtual learning environment" (or course management system) (e.g. Moodle, Blackboard) and the weekly timetable
- developing the production elements, including in a way they come together and the lecture/course happens
- casting the show, assuming that lectures and other classes forming a course involve contributions from more than one academic
- rehearsing the show, which might involve course team meetings and similar but can be much less or even virtually absent in our experience.

Regarding the production itself, Cunningham (2011) singles out the dimensions of acting (e.g., the lecturer's character, voice, gestures, apparel and movement) and being prepared to address problems that occur in production. Possibilities include technology issues (e.g., audio-visual equipment not functioning), props malfunctioning (e.g. the font on the PowerPoints cannot be read at the back of the room), shows going off-plan (e.g., due to inclement weather, unexpected audience behaviour,) and participants having extraneous issues that interfere with the lecture(s) and/or course (e.g., dying relatives, seismic events) (for a list as part of a "trouble-shooting guide, see Devlin, 2010). In a further extension of the theatre analogy, she compares and contrasts the intermission at the theatre with assessments, including in-course tests and an end-of-course exam. The same cast as is in the show is usually involved, including in setting and reviewing or moderating assessment instruments, administering or conducting the instrument to or with students, and marking or assessing the responses from students; the show audience become individuals and play the assessees to the academic's assessor.

The upshot of Cunningham's (2011) contribution is that successful and enjoyable lecturing depends on the academic knowing what issues need dealing with before and during the performance, and understanding how to plan and implement what needs to be done, in a similar way to staging a theatre production. There is no one-best-way of carrying through a show; just contingencies to be aware of and consider for the time, place, audience, available cast and resources (see Devlin, 2010). One imagines that this knowledge can help the academic alleviate inadequate qualities and low levels of interaction in a lecture involving an audience of more than just a few students or, as is mostly the case, of large numbers. Cunningham argues that acting on these matters will help students (and lecturers) maintain suitable

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by objectives related to professional preparation. The least important objectives related to creative capacities and broad liberal education, followed by those concerned with increasing interest in learning, communication skills, values development and critical analysis.

[19] Cunningham (2011) reviews a significant number of earlier studies about large-lecture introductory accounting courses and finds none address the day-to-day considerations, planning, and mechanics of developing and teaching the courses they study.

levels of alertness and increase retention of ideas, concepts, etc. featuring in a lecture. Interaction also helps the lecturer get a feel for what students are learning and how they feel about the lecturer's performance. However, as she herself says, large numbers seem likely to thwart aspirations to implement types of pedagogy that are student-centred (see further discussion in S3.1.2).

Regarding other contributions in the accounting literature involving lectures, Craig's (2000) contribution cited above in connection with incivilities is not the only one in the form of *a postcard from the podium* to offer anecdotal or experiential advice. In some of these, the authors relate them to literature, but usually it is the broader education literature. For example, Stone (2014) relates how he drew on Lynch's (2011) work on interactive lectures to overcome the problem of an evening lecture that was full of tired and pre-occupied students, because they had just arrived from a full day of office or similar work. Another study cited above, Aldamen et al. (2015), which focuses on lecture capture and lecture attendance, typifies another category, being studies conducted in the context of accounting but where the context might be seen as somewhat incidental (see also Paisey & Paisey, 2004b, about attendance). Another form of study that seems quite common in the accounting literature is to use an accounting context to compare and contrast traditional lecture methods with methods using other forms of class or other forms of learning (e.g., cooperative or collaborative learning, self-study, individual study) (e.g., Friedlan, 1995; Inglis & Dall'Alba, 1998; Murdoch & Guy, 2002; Sullivan, 1996). The authors of these studies are often intent on improving accounting education, and do not necessarily intend to make a contribution to the wider education literature, but they do provoke responses (e.g., see Holt, Michael, Crawford & Godfrey, 1997).

Studies of Lectures in the Wider Literature

Thorough descriptive studies of actual lectures, or other higher education classes, have increased in recent years (see Lynch, 2011) but continue to be uncommon, despite the potential they might have for theory development (cf. Barnes, 1998; Hativa, 1995). Where researchers have provided some description, mostly it has been as an adjunct to conducting a study with some other reason than to describe and analyse the situated practice of lectures or lecturing, or of being lectured to, for that matter. Karp and Yoels (1976/1998) interpret this omission as journal editors, reviewers and researchers treating classes as part of the world that Alfred Schütz criticises for being "taken-for-granted" (Schuetz, 1951, p. 166). Indeed, Karp and Yoels themselves relate their observations of lectures and similar classes of various sizes in the context of student behaviours. Similarly, Murray and Renaud (1998) posted observers to classes to observe the behaviours of teachers; Barnes was interested in teachers' questions, their cognitive level and their relationship to the talk of teachers and students; Hativa wanted to analyse the format, contents and events in lectures in a pure discipline to compare and contrast them with lectures in an applied discipline; and Boice (1998) wanted to observe at first-hand what he refers to as classroom incivilities, which although frequent, seemed to have been far outnumbered by classroom civilities.

Even so, from studies like these and our ad hoc participant-observations, we can glean some things people involved in lectures do during them, and appreciate variations in the proportions of time these things take up in different lectures. We can also induce other characteristics (e.g., venue architecture, class size, class composition by age, gender, race and experience, authority relations, peer relations, composure and discomfort/apprehensions on the part of all those involved) and consider how and why these are interrelated with the learning situation in general and with discipline, learning environment, educator characteristics and perspectives, and student characteristics and perspectives in particular (cf. Weaver & Qi, 2005). We know from these studies that some things are far more prevalent in lectures (e.g., the lecturer talking, the students seemingly listening or being passive) than others (e.g., the lecturer asking questions of students, a few of the students talking, the lecturer listening or responding to questions from these few students). Students are known to download PowerPoint slides and collect handouts prepared and distributed by lecturers, and take notes of what lecturers say, although the quality of notes varies significantly (Reddington, Peverly & Block, 2015), as do what students do after lectures with the items obtained. Increasingly, lectures are recorded, usually with the materials projected on the lecture theatre screen forming the visual and the lecturer's voice forming the audio, although which students watch them, when and for what purposes and with what effects is only now beginning to clarify (Aldamen, Al-Esmail & Hollindale, 2015; Green, Pinder-Grover & Millunchick, 2012). Clearly, however, the

recording on its own differs from a live lecture in being one-way, rather than the two-way, iterative event discussed by Waugh and Waugh (1999).

Regarding incivilities, as distinguished from civilities, these seem to feature in many classes, notwithstanding that they are things many people involved in classes wish did not happen or would prefer to forget (Boice, 1998). We believe they can be useful in probing the phenomena of lectures. So, lectures are often disturbed, disrupted or impeded by people involved in them (or not involved in them (see Craig, 2000)) doing extraneous things that generate noise and similar distractions. This includes students (and even lecturers) arriving at the lecture venue after the advertised time and leaving while the lecture is in progress, or students chatting, and playing games or watching movies on their electronic devices. Then there are lectures running beyond the advertised finishing time; lecturers being condescending (e.g., being aloof of manner, using words that cannot be familiar to students and deliberately not explaining them, knowingly going through material at a pace far too fast for students); lecturers and students not adhering to modern mores (e.g., displaying sexism, racism, homophobia). The situation of legitimate behaviours attracting censure or acts of disapproval is not uncommon either. For example, when a student who asks a question, other students may deliberately rustle papers, or make hissing and groaning noises. Similar acts arise from some students when a lecturer asks students to complete legitimate tasks during (or following) a lecture; indeed, some requests may lead some students complaining anonymously to university managers or on social media about that lecturer's teaching or similar. Occurrences of incivilities, and much else related in this paper, are indicative of lectures being social situations, arena of social interaction, ambiguity and controversy, where the informal is at least as important as the formal (see Weaver and Qi, 2005); these are things which often seem overlooked in the cookbook recipe style manuals on how to give a good lecture. The implications are that lectures and lecturing, like much else that academics do in their work, requires judgement, evaluation and critical reflection (Hofstede, 1981; Brookfield, 1998).

Just as the rise in the popularity of lectures, at the expense of recitations, was controversial (see S1), so lectures attract criticism and controversy because they are so ascendant and play a central role in courses; much of the criticism is an extension of that levelled at discipline-centred and teacher-centred teaching, in which lectures are so prominent (Dressel & Marcus, 1998; Fuhrmann & Grasha, 1998; Phillips, 2005). Many of these criticisms take the form, "the problem with lectures is . . . "; and as a corollary one finds advice about the circumstances of when the lecture technique is suitable and how to use it, and when it is not appropriate (e.g., see Verner & Dickinson 1967), and the contention that lectures should be seen in the context of an entire teaching package (Waugh & Waugh, 1999). These criticisms are a further source of dialectic about the form, content, deployment, etc. of lectures, including vis-à-vis other forms of classes (Cooper & Robinson, 2000).

For example, one strength of lectures is said to derive from being able to give students information that is useful for gaining insight into a subject and/or to complement or substitute a textbook (Bligh, 2000, cited by Dillon, 2013). However, DeNeve and Hepner (1997) claim that lectures are characterised by students being passive, tending to receive information without ever thinking about the material,[20] or not understanding it but being prepared to write it down as "lecture notes" anyway. Similarly, lecture classes are often associated with the milk pitcher theory of education (Fuhrmann and Grasha, 1998; Postman & Weingartner, 1969) and the banking concept of education (Freire 1970/2000; Merriam & Caffarella, 1998), both of whose authors were criticising the notion of knowledge being poured into or deposited in student receptacles. Further criticisms are of lectures being associated with cookbook methods, particularly in the area of problem solving (McKeachie, Pintrich, Yi-Guang, Smith & Sharma, 1998); and encouraging shallow, non-reflective learning, whereby students "learn merely by passively digesting the pearls of wisdom transmitted to them by their professors" (Fuhrmann and Grasha, p. 11) within a process of receiving, memorising and repeating, and not retaining for long or being able to apply. Indeed, van Dijk and Jochems (2002) and van Dijk, van den Berg and van Keulen (1999) argue that students drift into such a transmission model of learning; that is, students read into the learning situation that the purpose of lectures is for facts to be transmitted from the lecturer to their records, which they then "learn" in order to

[20] This is reminiscent of the old joke about a lecture being the process whereby the notes of the lecturer are transferred to the notes of the students without going through the brain of either (see Lambert, 2012).

reproduce them in summative assessment episodes. From the perspective of students, lecturing effectiveness is defined by how well lecturers communicate with students, most particularly in explaining concepts (Byrne & Flood, 2003).

Further observations, by Johnson, Johnson and Smith (1998), include the possibility of the lecture being clear, exciting or entertaining but misleading; and difficulties arising when account is taken of the lecture being seen in the context of the day of each student or the experience of each student. They point to some students being preoccupied with what happened before a lecture, what is happening elsewhere during a lecture or what might happen after a lecture (e.g., these might be personal, domestic, assessment-related, sporting, current affairs, weather-related), and to some students being uncomfortable with the lecture, being in a crowd but feeling isolated and alienated either as persons or as students. Waugh and Waugh (1999) raise the possibility of students conceiving lectures as an out-of-date technology, one they are less familiar with than those associated with electronic devices; and that they are impersonal and of the nature of one-method/approach/style-fits-all. However, they counter that with arguments about how to better use lectures interactively, including to enthuse and motivate involvement in the other elements of a teaching package and work with other students. They stress the importance of ensuring sufficient focus on the structure and clarity of the lecture, the learning and information content of the lecture, and the use of relevant illustrations and examples. Hativa (1995) notes the importance of lecturers repeatedly explaining to students the main objectives of the lecture.

Barnes (1998) adds to this disappointing picture. She relates that in lectures at various stages of a degree not only is, as one might expect, the most frequent level of questions at the lowest cognitive level (i.e., requiring students to exercise cognitive memory) but that these questions form the vast majority (about 80%) usually; moreover, questions requiring convergent thinking by students are often the only other type asked. This occurs in spite of the fact that divergent thinking and evaluative thinking by students are the most effective for learning effectiveness. She also found that about a third of questioning did not elicit responses or similar participation from students, and so silences occurred; and questioning and answering formed only about 5% of lecture durations (see also Karp & Yoels, 1976/1998; Weaver & Qi, 2005).

Concerned about some of these problems with lectures, Dillon (2013), like Waugh and Waugh (1999), argues that on their own, lectures cannot promote thought or change attitudes without significant variations to their delivery formats. In keeping with this argument, a torrent of literature has arisen about active learning within the lecture format, resulting in a proliferation of techniques, some backed by increasingly constructivist theories purporting to explain why active learning is superior to passive learning (King, 1993; Prosser & Trigwell, 1999). Dillon himself argues for changes in the delivery format of lectures, saying the learning environment of the traditional lecture cannot promote thought or change student attitudes towards learning. He refers to the introduction of student practice and rehearsal, active learning, 10-minute breaks, vivid instructional experiences and more dialogue between students and professors. The approach offered uses students' curiosity and existing knowledge as an entry point to form new knowledge and ways of thinking. The guiding assumption is that students who actively engage with course material through class discussion, writing essays, and role-playing activities are more likely than passive students to recall information, engage in critical and higher order thinking, change deep-seated attitudes and acquire professional skills. In a similar vein, van Dijk and Jochems (2002) and van Dijk, van den Berg and van Keulen (1999) find that in contrast to the problems they identified, as mentioned above, students develop more advanced and deeper learning strategies if encouraged to do so by their teachers.

Dillon (2013) claims to build on constructivist theory and active and experiential learning (e.g., Bonwell & Eison, 1991; McKeachie & Svinicki, 2013) about wakening students' curiosity and existing knowledge as an entry point to form new knowledge and ways of thinking in psychology. The idea of teachers encouraging, enthusing and motivating students resonates with a process approach to learning and a pedagogy of continuing dialogue between teacher and student, contingent completely on a student's learning needs, as advocated by Laurillard (2002), and akin to some blend of student-centred affective teaching and student-centred cognitive teaching (see Dressel & Marcus, 1998, for a comparison of these with discipline-centred and teacher-centred teaching). The classroom procedures consistent with such a

blend would stress teaching how students seek and find resources/knowledge for solving problems, to work independently, to benefit from working with other people, and to ask the right type of questions; they would stress people skills for learning as well as specific content (see Fuhrmann and Grasha, 1998). Thus, although Dressel and Marcus see a place for lectures in student-centred teaching when taking a cognitive approach (see also Miall, 1989), the purpose, format and prevalence of the lectures is quite different from the lectures that we are more familiar with and to which we believe most writers are referring, being lectures associated with discipline-centred and teacher-centred teaching. Waugh and Waugh (1999) echo some of this, but play down any conflictual distinction between teacher-centred and student-centred approaches, claiming that "students are stimulated, encouraged and motivated by good group-focus lecturing, and they can learn more efficiently when lectures are used as part of an overall teaching package" (p. 35). They also suggest that many issues are not about the lecture method *per se* but the quality of lecturing, including an inattention by lecturers to immediacy matters, such as posture, voice, lightheartedness, arranged and interesting breaks during the lecture, a motivating and stimulating delivery to the students and a personal and helpful relationship with them, etc. (see Witt, Wheeless & Allen, 2004), and above all to creating a group atmosphere in the lecture hall.

Discipline

The word "discipline" is something of a mongrel, its many meanings deriving from various antecedents (see Oxford English Dictionary, 2016). We use it to mean a branch of learning or knowledge, corresponding closely with the notion of an academic field of study or subject. Disciplines are a major factor in the learning situations experienced by participants in higher education, particularly in the sense of the structure, process and content of programmes, as well as the more practical question of where a lecturer is formally based should students wish to contact him or her. However, as set out in the next paragraph, it does not stop with academic departments and programmes of research, study and learning being associated with particular disciplines, or with academics identifying more strongly with their disciplines than with the particular institutions where they happen to work (Healey, 2005; Neumann, 2001).

Disciplines differ in the accepted or agreed state of paradigm/knowledge development and the structures of that knowledge, including in the significant matter of concepts[21] (Biglan, 1973a, 1973b; Donald, 1983, 1986; Hativa, 1995; Neumann, Parry & Becher, 2002), and their academics' experiences of research, teaching and learning (Robertson & Bond, 2005b). Disciplines differ in their alignment with and acceptance of philosophies of higher education, such as being utilitarian and vocational, or scientific and intellectual, or liberal and general (Fuhrmann & Grasha, 1998)—noteworthy is the longstanding symbiotic relationship between accounting education and the accounting profession (Frederickson & Pratt, 1995), which in New Zealand dates back over a century (see Trow and Zeff, 2010) —and in the orientation of their teachers (e.g., discipline-centred teaching, instructor-centred teaching, student-centred teaching) (Dressel & Marcus, 1998). Accordingly, the nature of the learning materials, equipment and tasks involved in a programme vary according to the disciplines to which they are allied (Fincher, 1998; Hativa, 1995), and so too do learning (and assessment) demands of different disciplines (Kolb, 1998; Neumann, 2001; Neumann et al., 2002; Robertson & Bond, 2005b). Disciplines differ in the demographics of the academics and students they attract, possibilitating sociocultural variations, including in their ethical, moral and cultural underpinnings and effects on learners (Chatard & Selimbegovic, 2007; Guimond & Palmer, 1996; re accounting and business, see Ferguson, Collison, Power & Stevenson, 2011); students' styles of learning, approaches to learning (and changes therein) and other characteristics they exhibit are greatly influenced by the discipline/disciplinary culture they encounter, particularly during their undergraduate educational experience (Hativa & Birenbaum, 2000; Neumann, 2001; Parpala, Lindblom-Ylänne, Komulainen, Litmanen & Hirsto, 2010; re accounting, see Friedlan, 1995; Jackling, 2005a). Disciplines are important in gathering and interpreting SET scores; as outlined in S1, these scores are

[21] From an investigation of the structure of knowledge in several academic areas (which did not include accounting and finance), Donald (1983, 1986) surfaced disciplinary differences in key (or important) concepts along the following dimensions: technical and course/discipline specific or otherwise; concrete or abstract; presented symbolically or otherwise; standalone or inclusive; and salient or vivid. This results in a wide range of actualities in the knowledge structures she examined.

known to differ by discipline (see also Note 14). In addition to their direct implications for matters referred to so far, differences in disciplines have implications in regard to institutional personnel policies, student study skills support services and academic staff development programmes, and for institutional learning and organisational development (Neumann, 2001). In most universities, disciplines are in different academic departments, which often vary in the resources they are allocated, the numbers of academics they employ as a ratio of the numbers of students studying courses associated with the discipline/department, the absolute numbers of students enrolled and their admissions ratios (i.e., intake : applications, or similar).

Given how our study had been prompted by lower SET scores in accounting and finance than in many other disciplines, knowing the reasons for SET scores differing by discipline could be illuminating for our study. However, from a revision of their own work and a review of the work of others, Benton and Cashin (2014) find these reasons are still more a matter of conjecture than of evidence, and they outline several interrelated possibilities, as do Kember and Leung (2011). The most obvious possibilities are ones we jumped to, to do with academics and their teaching behaviours: lower rated disciplines may be taught more poorly and, conversely, that teaching in higher rated disciplines tends to be more effective. This might be particularly true in aspects of teaching performance closely related with overall SET measures; that is, the teachers' behaviours may dampen interest, discourage collaboration or deter student involvement.

No less obvious, however, are possibilities to do with learning and with students. Regarding learning, the levels at which cognitive objectives (à la Bloom's taxonomy – see Bloom, Hastings & Madaus, 1971), learning outcomes and assessments, and so teaching, are pitched vary from one discipline to another, so prompting different responses from students. Many students may find the thinking, concepts, etc. associated with disciplines to be more difficult technically or intellectually, even to the point where they wish they had not taken the course, and this may lead them to give lower ratings. Similarly, the demands of some disciplines for certain learning styles and learning approaches can be at odds with those preferred by some of the students (Kolb, 1998). Disciplines requiring quantitative reasoning skills seem particularly vulnerable on these counts. In some disciplines, the concepts and their applications, and other matters of content, are more sequential or hierarchical (e.g., see Hativa, 1995), and so students in a programme in these disciplines are obliged to sustain their knowledge from earlier courses through to later ones. Related to this sequencing is that students are taught by a series of teachers, and therefore, if the sequencing is to be logical and organised, those teachers must subordinate their preferences to forms of coordination, such as a set syllabus,[22] and discussing and agreeing about teaching content and methods: in our experience this is not something that comes naturally to most of our colleagues (or to ourselves, for that matter). However, there is a dearth of research into whether, how or why these levels, learning demands, etc. correlate directly with student ratings (Benton & Cashin, 2014; Kember & Leung, 2011).

On the question of learning outcomes being differentiated by discipline, the literature on generic skills and graduate attributes commensurate with being an accountant and fitting with the profiles desired by accounting employers is burgeoning (e.g., Bui and Porter, 2010; Jackling & De Lange, 2009; Jones, 2010; Stone & Lightbody, 2012); the general drift of this literature is that accounting students should learn and be assessed on these skills and attributes as part of their undergraduate education (Sin & McGuigan, 2013), and so they should be among the learning outcomes published for accounting programmes. However, as Jones (2010) points out, it is often considered that much of the required learning can be super-disciplinary, in the sense of being learnt separately from and overlaid onto disciplinary content, whether it is accounting, history, physics or zoology. Having considered these skills and attributes in several disciplinary contexts, including accounting (Jones, 2010), she demonstrates that they are "highly context-dependent, and are shaped by the disciplinary epistemology in which they are conceptualised and taught" (Jones, 2009, p. 85) (see also Jones, 2013).

[22] In analysing a physics lecture, Hativa (1995) noted that the lecturer assumed knowledge that students would have covered not only in other university courses but also at their different secondary schools, presumably in accordance with a common physics syllabus for the jurisdiction whence most students hailed.

Regarding students, there seems to be some relationship between the nature of disciplines and the participants they attract, including students, teachers and practitioners. A student's background and the disposition or motivation of a student to take a course seem to affect the SET ratings the student gives to a course. Taken in aggregate, according to the choices of discipline students of certain backgrounds and motivations make, this can lead to differences in SET scores by discipline (Benton, Li, Brown, Guo & Sullivan, 2015).

Murray and Renaud (1998) compared lecture teaching behaviours by academics from three disciplinary groups; the groups comprised 8 disciplines from Arts and Humanities, 6 from Social Sciences and 10 from Natural Sciences and Mathematics respectively, but neither accounting or finance were among them. They were intent on understanding whether different habits that teachers in these disciplinary groups exhibited were a possible explanation for SET scores differing among disciplines. They found that the frequency with which the lecturers used particular behaviours differed significantly between the three disciplinary groups. They also found that the teaching behaviour categories (Murray, 1983) most responsible for these disciplinary group differences were interaction, organisation, pacing, disclosure, rapport and mannerisms—the other four factors they analysed were clarity, expressiveness, interest and speech quality—but that the greater or lesser use of behaviours associated with each of these categories was in opposite directions (e.g., Arts and Humanities teachers used more interaction-type behaviours than the others but used less organisation-type behaviours than the others).

Murray and Renaud (1998) also established strong correlations between the teaching behaviours and lecturing effectiveness as indicated by SET scores. But despite the frequency of these behaviours differing by disciplinary group, the particular behaviours or behaviour types made similar contributions in each disciplinary group to lecturing effectiveness, as measured by SET scores. However, they could infer from their analysis that the wider range of behaviours among teachers in one of the disciplinary groups, namely Arts and Humanities, compared with the other two contribute positively to SET ratings of lecturing effectiveness.

Laughlin (2014) completed a study whose intents included a similar one to Murray and Renaud (1998); she examined the possibility that particular disciplinary cultures support pedagogical approaches by academics from a discipline, and these approaches are more effective and result in higher SET ratings. As part of her study, Laughlin tried to classify the accounting and finance disciplines, among about 80 others. She used two extant classifications, namely the work of Biglan (1973a, 1973b) on disciplinary clusters (to which Murray and Renaud make passing reference),[23] and the work of Holland (1966, 1997) on academic environments; she tried to evaluate which is the more relevant in explaining those disciplines with systematically higher-lower ratings. She concludes that the Holland environments may be useful when interpreting SET scores within an academic cluster coinciding within a college (or equivalent university administrative unit), especially if the college comprises disciplines that vary in tending to receive high or low ratings, or across academic disciplines in different colleges. However, why this should be so and how to use Holland's theory are not clarified in her study.

An issue arising from Laughlin's (2014) work is where the accounting and finance discipline(s) and their academic and practising members sit, either in where it is clustered in studies following on from Biglan (1973a, 1973b) and in practice, or in applying the work of Holland (1966, 1997) on academic environments. In our workplaces (and in Laughlin's study), both accounting (including bookkeeping and data processing) and finance are clustered with other business disciplines (e.g., business administration, management, tourism and hospitality, marketing, business information systems), and economics. Categorised using Biglan's method, there is some variation in these disciplines, as proposed by Arbaugh (2010) (see Figure 4). Accounting and finance are applied, non-life and more hard than soft, setting them

[23] In this classification, disciplines are differentiated into up to eight clusters on the grounds of (1) the degree of consensus on paradigm development, or hard in contrast to soft; (2) the absence/presence of practical application, or pure in contrast to applied; and (3) the presence/ absence of living organisms, or life in contrast to non-life (see Kember and Leung, 2011, p. 279).

apart from the other business disciplines in up to all three dimensions, the latter applying to the micro-level management discipline (see also Becher & Trowler, 2001).

This situation of accounting and finance vis-à-vis the other business disciplines is a significant point of difference, given one of Kember and Leung's (2011) findings; that is:

> *the teaching in business therefore placed an emphasis on developing working together capabilities through learning activities. There was less stress than science [which accounting and finance resemble in being a hard (not soft) discipline group] on teaching a body of knowledge. This is presumably because the disciplinary knowledge is not as well established, particularly in management and marketing, while greater importance is attached to the development of business skills (p. 296).*

This teaching of a body of knowledge[24] in science corresponded with a preference in hard disciplines to use didactic methods and techniques, including lectures and lecturing, and so corresponded with such a preference in accounting and finance (see S3.1.1).

Figure 4. Business Discipline Areas in Biglan' (1973a, 1973b) Three Dimensions

	Hard/Soft		Soft	
Task area	Non-life system	Life system	Non-life system	Life system
Pure/applied	Economics	Economics?		Micro-management (organization behavior, human resources)
Applied	Accounting, finance, operations/ logistics		Information systems	Macro-management (strategy, organization theory) marketing

Figure 4 is reproduced from *Online and blended business education for the 21st Century: Current research and future directions* (p. 11) by J. B. Arbaugh, 2010, Oxford: Chandos. Copyright 2010 by J. B. Arbaugh.

A further, related point on this matter stems from Kolb's (1998) discussion of Biglan's work and his own on learning styles. Reflecting data from accounting students and finance students who perhaps were experiencing a softer approach to accounting and finance, more in keeping with Friedlan's (1995) description of a non-traditional course (i.e., it was based on class discussion, interaction and critical thinking (see Smith, 1998) around contextual materials contained in cases and news articles) and so with the other business disciplines enumerated above, Kolb classified their (average) learning style as *accommodators*. That is, they have a concrete view of the world and prefer experiencing events and doing things, from which they learn practical, real knowledge and skills, of immediate application akin to being members of a social profession (see Kolb, 1998, p. 136), through the exercise of cognitive memory and convergent thinking. The latter characteristic, and a certain narrowness in economic outlook (see Ferguson et al., 2011), results in a tendency towards another of Kolb's learning-styles types, that of *convergers*, a style more closely associated with engineers and computer scientists.

[24] To further appreciate this concept and its implications, Anderson and Day (2005) provide a useful contrast. They look at the history discipline with its "diversity of historical knowledge" (p. 330), and note the reliance on there being a "community of scholars" to establish and sustain "commonalities in historical practice" (p. 331).

Meanwhile, in applying Holland's theory, Laughlin (2014) associates accounting with an investigative environment,[25] and finance an enterprising environment,[26] which seems to follow Holland (1966); however, she associates bookkeeping and data processing with the conventional environment.[27] In contrast, in their study of Canadian chartered accountants and Californian certified public accountants, Aranya, Barak and Amernic (1981) found that, consistent with earlier studies, neither of these types of accountant fitted with the investigative type. Meanwhile, the enterprising type was appropriate to some extent, although nothing like as much as the conventional type. Incidentally, Holland (1997) classifies accounting as conventional, and finance as investigative (see Lester, 2012).

Regarding Lester's (2012) study, he was intent on comparing the demands that academics and courses from different disciplines made of students majoring in particular disciplines, including accounting and finance. Demands in this sense related to course activities involving thinking skills; these thinking skills were on a scale comprising memorising, analysing, synthesising and organising, evaluating, and the application of concepts and theories.[28] He found that the accounting discipline and the finance discipline made similar demands of students, and these demands were consistent with an investigative environment (and so, inconsistent with the studies of accountants referred to above and, as Lester notes, inconsistent with Holland's later classification of accounting as conventional). He also found many patterns that were incongruent with Holland's theoretical assumptions, so raising two questions: whether disciplines have changed over the decades between Holland's work and his own; and whether the academic environments associated with disciplines differ from the environments in which disciplinary knowledge and skills are practised.

Regarding considering SET ratings and evaluating lecturing effectiveness and effectiveness of student learning, perhaps Laughlin's (2014) conclusion that looking within a discipline, rather than just across disciplines, is important. This seems as far forward as Kember and Leung (2011), who suggest "that there is a common model of what constitutes good teaching which is independent of discipline" (p. 281), but with acknowledgement of work and opinions to the contrary. One such opinion is "claims that certain undergraduate or postgraduate teaching practices are more successful need to be treated cautiously" (Neumann, 2001, p. 142). In any case, given that teaching practices by academics from within a discipline are influenced by their peers in their discipline (e.g., see Neumann et al., 2002), the extent to which the common model is used within the discipline will reflect and be reflected in teaching effectiveness, SET scores and the effectiveness of student learning in that discipline.

On the question of "good teaching" in the accounting discipline, in their study of accounting teaching in six New Zealand higher education institutions, Dyson and Godfrey (1997) used the repertory grid technique (Kelly, 1955) to ascertain students' opinions of the characteristics of good accounting teaching. They identified 20 items as important. The items are listed in Table 3 in order of importance. Xiao and Dyson (1999) completed a similar study in three higher education institutions in Beijing, China. They claim that use of the grid technique reduced the possibility of bias arising when respondents or informants are asked to answer questions chosen by a researcher(s), for example, in compiling a questionnaire.

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[25] *Investigative* environments suit people who enjoy analytical activities. Such environments "emphasise analytical or intellectual activities aimed at the creation and use of knowledge. Investigative environments reward people for scepticism and persistence in problem solving, documentation of new knowledge, and understanding solutions of common problems" (Laughlin, 2014, p. 26).

[26] *Enterprising* environments suit people who are motivated by financial gain or attaining organisational goals. These environments "emphasise activities that involve the manipulation of others to attain organisational goals or economic gain. Enterprising environments reward people for the display of initiative in the pursuit of financial or material accomplishments, dominance, and self-confidence" (Laughlin, 2014, p. 26).

[27] *Conventional* environments enjoy explicit, ordered jobs. These environments "emphasise activities that involve the explicit, ordered, systematic manipulation of data to meet predictable organisational demands or specified standards. Conventional environments reward people for the display of dependability, conformity, and organisational skills" (Laughlin, 2014, p. 26).

[28] For a discussion of the role of concepts in learning different disciplines, see Hativa, 1995.

Noticeable about the results of both the Dyson and Godfrey (1997) and Xiao and Dyson (1999) studies is the *teacher* being very much at the centre of the *teaching*. In our minds, this begs questions of whether the teacher is also seen as being at the centre of the *learning*, or to what extent accounting and other students can and do distinguish *teaching* from *learning* (Åkerlind, 2008; Gracia & Jenkins, 2002; Moon, 2004). A further impression is that the students conceive much of the teaching taking place from the lecture podium, given the matters ranked 2nd, 4th and 6th. However, an alternative is that the students who took part in the research perceived, or leapt to the understanding that they were being asked to write about teaching and teachers, rather than learning, assessment or related student activities.

Table 3. Characteristics of Good Accounting Teaching in order of Students' Importance

1.	Teacher's concern and respect for students, friendliness of the teacher
2.	Clarity and understandableness
3.	Teacher's preparation, organization of the course
4.	Teacher's encouragement of questions and discussion, and openness to opinions of others
5.	Personality characteristics of the teachers
6.	Teacher's knowledge of the subject
7.	Teacher's availability and helpfulness
8.	Nature and usefulness of supplementary materials and teaching aids
9.	Teacher's stimulation of interest in the course and its subject matter
10.	Nature and value of the course materials
11.	Teacher's sensitivity to, and concern with, class level and progress
12.	Teacher's enthusiasm for the subject and for teaching
13.	Nature, quality, and frequency of feedback from the teacher to students
14.	Teacher's elocutionary skills
15.	Teacher motivates students to do their best; higher standard of performance required
16.	Teacher's intellectual expansiveness
17.	Clarity of course objectives and requirements
18.	Intellectual challenge and encouragement of independent thought
19.	Instructor's fairness and quality of examinations
20.	Teacher's productivity in research and related activities

(Source: Xiao & Dyson, 1999, p. 350)

Entwistle and Tait (1990) allude to a questionnaire they used that did just that. The problem with the questionnaire data was revealed when they followed it up with student interviews. These interviews revealed that not only were level, pace and logical structure of presentation important to good teaching, but so too were explaining, being enthusiastic and showing empathy.

Furthermore, approaches to learning were predicated on assessment procedures, feedback on assignments and provision of resource materials (see also McLaughlin & Faulkner, 2012, on how they derived data about student expectations of university facilities).

Entwistle and Tait (1990) incorporated their rough ideas into a heuristic model, as reproduced in Figure 5. We refer to this model in later sections, including in S3.4. However, in anticipation of the latter, we should note something about students' work habits, study methods, and course motivation. Undoubtedly, these differ among students, and in students from one discipline to another, as shown by Hoyt and Lee (2002). On examining them across disciplines, including accounting, they found that students expended more effort on accounting courses compared to most other courses they had taken—this finding is among accounting students in North American universities, where the number of non-accounting courses taken by these students is significantly greater than in New Zealand. The finding was in keeping with accounting students finding their courses more demanding than students studying other disciplines.

Figure 5. The Teaching–Learning Process in Higher Education

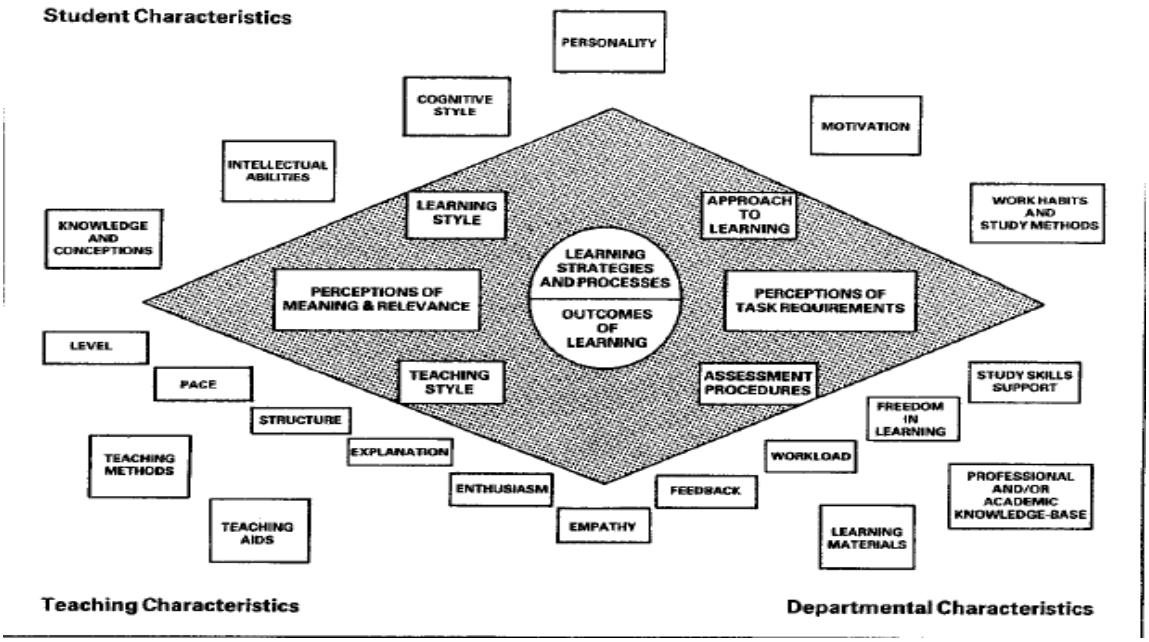


Figure 5 is a heuristic model reproduced from “Approaches to learning, evaluations of teaching, and preferences for contrasting academic environments,” by N. Entwistle and H. Tait, 1990, Higher Education, 19, p. 173. Copyright 1990 by Kluwer Academic Publishers.

A further observation about the disciplinary differences signalled in this section among students, those attracted to some disciplines may have quite different common attitudes and expectations regarding knowledge, learning, teaching, etc. compared with those common to students attracted to other disciplines. Thus, borrowing ideas from other disciplines in all we write in S3.1.2 and everywhere else from now on should be seen in that light and treated with caution.

Learning Environment

The concept of the *learning environment* is used extensively and probably with good reason. According to Memmott and Brennan (1998), the quality of the student’s learning environment, including the resources and support functions it contains, combined with the student’s characteristics, and the dynamics of the learning process into which the student has entered, influences the effectiveness of the learning that the student realises from going through this process. Jackling (2005a, 2005b) argues that elements of the learning environment that accounting academics can control can be used to influence the ways in which students approach their learning and their learning effectiveness in positive ways. However, a closer look at this argument indicates that there are difficulties to be recognised, and these go back even to what is meant by writers who use this term or concept, *learning environment*.

These difficulties are more than touched on by Anderson and Day (2005) in opining that “an analytical description of what constitutes a learning environment may be a very challenging and value-laden enterprise, but it is a task that cannot be shirked if one is to produce a well-principled account of what makes for high quality learning and teaching” (p. 321). Indeed, we found the concept so widely written about that there are many definitions, descriptions and explanations of what the term “learning environment” means, what it comprises, and how and why it is important. Indeed, such alternative expressions as “environment for learning”, “learning-teaching environment”, “teaching-learning environment”, “environment for student learning”, “educational environment” and “academic environment” add to the mix (cf. Entwistle & Tait, 1995; Fraser, 2012; Hativa, 2000).Memmott and Brennan (1998) view the learning environment as being defined by “the dynamic interaction of physical, interpersonal, socio-

cultural, and even spiritual conditions" (p. 86). Similarly, Anderson and Day see "university learning environment as a set of artefacts and processes which involve dynamic interaction between cultural and technical tools (with their affordances and constraints), goals, social norms and practices, and prior experiences which shape participants' understandings of a current setting" (p. 323). And Soemantri, Herrera and Riquelme (2010) cite sources to the effect that the learning environment is the manifestation of a curriculum and of the effects on students of the various parts of the curriculum.

Thus, it seems that the term *learning environment* represents an important concept in the quest for more effective lecturing and better student learning (see Devlin, 2010), but that is difficult to isolate, being a catch-all for a host of conditions separable from but interrelated with learners, learning and teaching, or, indeed, encompassing them as well (e.g. see Lord and Robertson, 2006, p. 44). The only proviso seems to be that the condition(s) (might) bear directly, indirectly or subtly, and simply or complicatedly on the effectiveness of student learning, and in passing on teaching effectiveness and student satisfaction with the learning experience. This is consistent with Fincher (1998), who comes at the concept in another way, distinguishing (1) learners, (2) the learning and (3) the teaching *per se* from (4) any other *situational or environmental variables* that are a major factor in influencing learning outcomes. Even so, one has the further problem to deal with in practice of separating such other variables from those one associates with (1)–(3). For example, taking Entwistle and Tait's (1990) model of the teaching–learning process (see Figure 5), where do the boundaries lie between the four? Perhaps they do not, perhaps there are no boundaries: this would be consistent with the *weave* metaphor discussed by Anderson and Day (2005), with the environment constituted by a weave of analytical strands, and the weave itself constituting a *shared space* in which teachers and students are active.

And as to the relative and relational effects, impacts or influences of the aforesaid four, if we were to represent these on our Figure 2, the necessary arrows and similar means of signalling these would so criss-cross the diagram as to severely impair its readability. In fact, this problem is averted in practice by not obsessing about a strict definition or precise use of the term learning environment. Indeed, on examining research practice, Wu, Tennyson and Hsia (2010) find that the tendency has been for the physical or built and social environments in a classroom or slightly broader settings (e.g., the course, the department, the degree programme) to be the limit of many studies. Moreover, those so limited have often examined only one or two elements of the learning environment (e.g., educational technology, classroom mechanics, learning atmosphere, learning climate, feedback on assessments), perhaps without according them the status of elements in a learning environment. This is in contrast, for example, to McNaught , Leung and Kember, (2006), who looked at each of the undergraduate programmes at one university, although they took into consideration only the variety of learning activities on a programme, the level of interactivity with teachers and other students, the quality of the feedback students received from their teachers, the relevance of assessment to guiding student learning, and the coherence of the courses as a programme of study and learning (see also Sin & McGuigan, 2013). It is also in contrast with extending the learning environment in perception and practice to study and learning support staff and areas (e.g., librarians and library collections, physical and electronic, course management systems or virtual learning environment systems, study skills and techniques advisors), and to other support staff and areas (e.g., career hubs and advisors, medical staff and health centres, sports, recreation and entertainment facilities and organisers). An even greater contrast are the authors whose studies have accorded various adjectives, or even rhetorical devices, to the term learning environment. Examples include conventional, constructivist, individualistic, passive, flexible, diverse, homogenous and collaborative. Indeed, some have even distinguished them as types as part of comparing and contrasting a learning situation; for example, see the study by Ballantine & Larres (2007) in which they analyse a cooperative learning environment and purport to compare it with traditional learning environments.

Special mention is deserving of a recent outpouring of literature on learning environments accompanying the possibility of e-learning. Indeed, a corollary of this e-learning is the coining of the term *virtual learning environment*, or VLE to use the more common expression, to refer to systems that deliver courses to students through the Internet, including study schedules and announcements, materials, activities,

assessments and collaboration tools.[29] Similarly, the adjectives blended, synchronous and asynchronous have emerged to distinguish types of learning with some "e" in them, and the literature has extended to the content, interaction, learning model and learner control in relation to such learning and learning environments. Not only has this strand seen concerns continue within the classroom learning environment (e.g., the use of video, clickers, mobile telephones) but also it has gone well beyond, to anywhere that information technology can reach. Inevitably, it has led to comparison of forms of e-learning with forms of classroom learning and teaching, including in matters of content, learning models (e.g., what students do, what teachers do and what learning results and how), and learner control of the instructional presentation (see Piccoli, Ahmad & Ives, 2001). However, not everyone is moving so quickly in practice to reap the potential of new technology for learning. Reviewing the literature on accounting students' attitudes to VLEs, Arbaugh (2010) relates that although students found these relevant and valuable, they saw them primarily as content repositories, rather than means of interacting with other course participants, and so indicating the body of knowledge to be learnt perception is alive and well among students of the accounting course/discipline.

Given the significance of the various ideas and objects included in the concept of the learning environment, it is vital to consider how learning environments arise and how they change; this includes who creates them, if anyone, and who can change them and how, again, if anyone can. On the "who" questions, Adler and Milne (1997b) are not alone in speaking thus: "learning environments that stress content over process . . . " (p. 111), so giving rise to questions of reification and institutionality. Similarly, these authors refer to educating students about reasons for course pedagogy, and so "reshap(ing) students' perceptions of the learning environment" (Adler & Milne, 1997a, p. 197). This puts on teachers at least some onus to acquaint students with their own perceptions of the learning environment in which the students are studying, especially if the environment is new to the students or different from their expectations, including what they are used to on other courses or at other higher education institutions attended or seen in drama, secondary school or other previous educational experiences and from the roles they have played in life so far. It also implies that teachers have perceptions of the entire learning environment (Hativa, 2000) and are significant in creating the learning environment on courses they teach, echoing associations that Hoyt and Lee (2002) make between teaching approaches and learning environments. This is reminiscent of Allan (1996) in pointing out a dichotomy between learning and teaching intentions. She argues that through curriculum design that involves a scheme of learning outcomes the teacher is obliged to reflect on and address issues about what they intend their students to learn at least as soon as dealing with what is taught. Moreover, among other things, the actual process of defining and expressing learning outcomes enables and encourages teachers to take a more holistic view of those outcomes, assessment strategy and methods, teaching and learning approaches, and curriculum content as elements in the learning environment that he or she is creating, and a more concurrent approach to fashion a course (Hattie, 2009).

In a further contribution (see Adler et al., 2000), Adler and Milne indicate that learning environments are far from being entirely at the discretion of teachers, noting that for whatever reasons (e.g., personal characteristics – see Lizzio, Wilson & Simons, 2002), students often want and demand learning environments that are teacher-controlled and lecture-driven, even though their teachers think that student-centred courses would be better for their learning and so try implementing such courses (see also Ballantine et al., 2016).

Indeed, in our experience, one way these student demands are made clear to teachers is through SET surveys and students complaining to managers about teachers who are "not doing their jobs properly" and "not giving us what we paid for" by not providing traditional lectures (cf. Weimer, 2014). Among matters fuelling this demand are the perceptions students have about learning and how they learn (Entwistle & Tait, 1995), something Adler and Milne (1997a) recognise (see quote above). In any case, students in general can respond to interventions in the learning environment, on condition that they are motivated and capable (Lucas & Mladenovic, 2004); and individual students can alter and reshape conditions in which they learn to some extent, and so control their learning environments (cf. Crisp, 2012).

[29] An alternative term seems to be course management system, or CMS; and learning management system, or LMS, is sometimes used.

As a corollary to these discretions among students, it is noteworthy that while students on a particular course or similar micro-level teaching–learning episode would seem to experience the same learning environment, each student likely perceives it in different ways from the others. It is his or her perceived learning environment that directly influences that student's approach to learning (Jackling, 2005a; Entwistle & Tait, 1995; Kember, Leung & McNaught, 2008), not what some might believe to be an objectively describable learning environment. Furthermore, his or her learning approach changes as his or her perceptions of the learning environment change (Jackling, 2005a). We return to these various matters in S3.3.1, and S3.4.1 and S3.4.2.

Similarly, institutional factors limit teachers' and students' discretion over the learning environment (e.g., see Adler et al., 2000; Frederickson & Pratt, 1995; Fuhrmann & Grasha, 1998). For example, our workplaces are typical in publishing a calendar of classes, examination periods, etc., and in publishing a weekly timetable of class meetings of particular official types (e.g., lectures, tutorials) of set durations (e.g., 50 minutes) on set days at set times (e.g. Tuesdays 9.00 to 9.50 a.m.). Without these provisions, one could expect chaos, but they do make it difficult or impossible for individual teachers to vary from norms without being criticised by students and by managers, administrators, other teachers, etc.

Student Conceptions of Learning Environment and its Elements

Above, we raised the issue of student perceptions of the learning environment being critical in understanding and addressing this concept from both researchers' points of view and, more importantly, from the points of view of teachers trying to improve learning effectiveness, including by engaging in interventions to improve the effectiveness of lectures and the proficiency with which lecturing is performed. In S2, we indicated that the focus groups we convened gave rise to nine themes: the groups associated these themes with student satisfaction, and so we interpreted them as nine learning satisfaction themes. We used them, and the support that existed for them in the extant literature, to devise 35 items for inclusion in the questionnaire we administered, as related in S2.5.

We show the nine learning satisfaction themes again in Table 4 (these are the same nine as in Table 2 but in a different order, as explained below). Another way of interpreting the nine themes, and below them, the 35 questionnaire items, is as elements perceived by students as constituting their learning environment. More particularly, the reason, or a significant reason, for wanting them to be performed satisfactorily, or for them to be in a satisfactory state, is that these elements in their learning environments are ones most important to their learning. We appreciate that this second interpretation may be a significant leap, reminiscent indeed of the possibility we mentioned above in relation to the list associated with the Dyson and Godfrey (1997) and Xiao and Dyson (1999) studies (see Table 3). However, we were careful to raise with students questions that stressed learning (i.e., What facilitated a satisfying *learning* outcome? What contributed to effective student *learning* outcomes? How has the environment contributed to their *learning* effectiveness?). Besides, the students did make mention of textbooks (Theme I) and peer support (Theme B), and alluded to things outside the classroom in other themes.

Regarding the questionnaire response data, each of the 35 items had been scored by student respondents on a seven-point scale, with "1" representing "strongly disagree" and "7" representing "strongly agree." In other words, the higher the mean score the greater the student's preference for and desire to see the particular item exhibited in their learning environment. We used the questionnaire responses to compute mean scores for each of the 35 items. The overall sample mean was 5.95 and the overall sample standard deviation was 1.23.

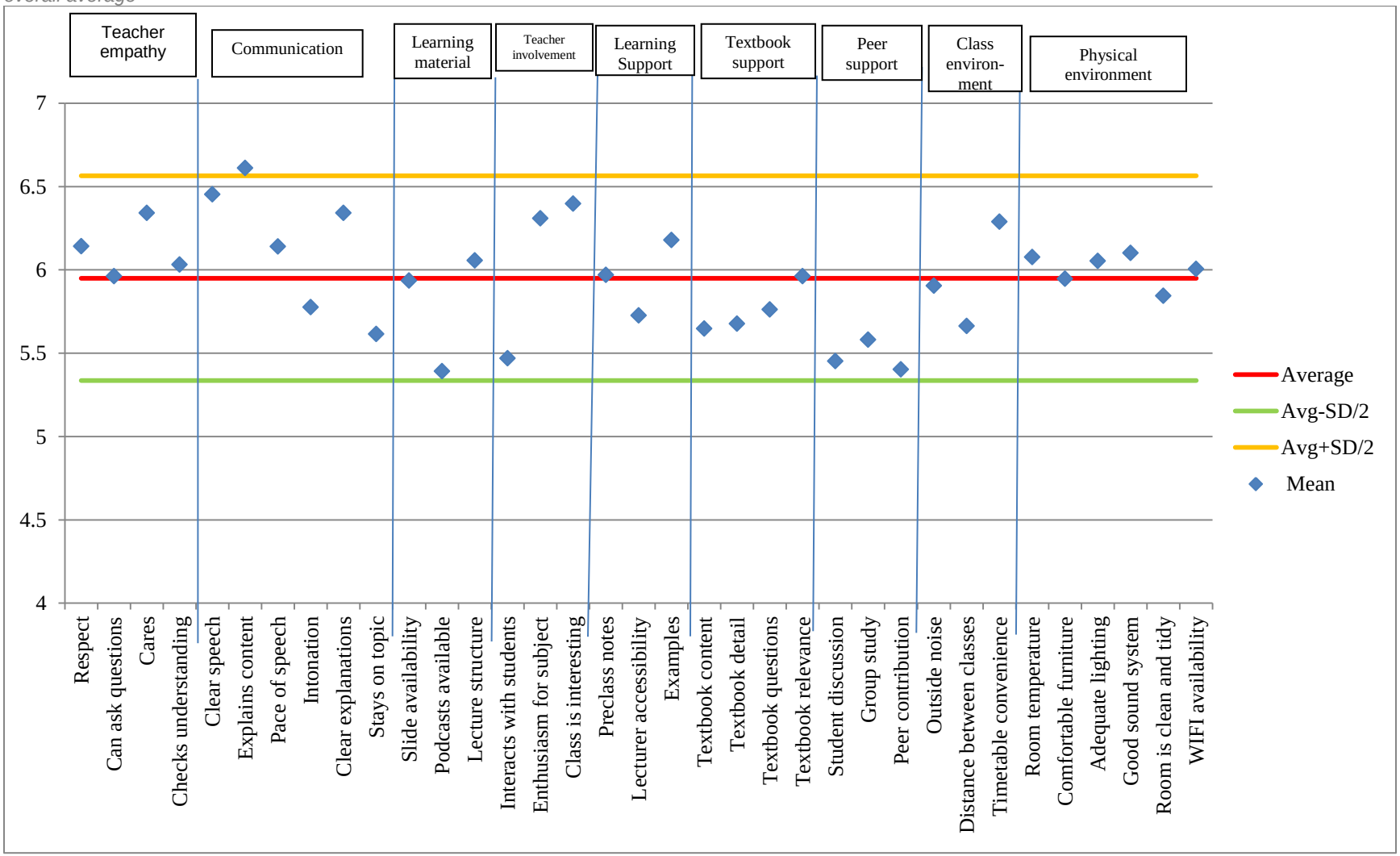
Figure 6 is a graph of the means of the 35 items. The overall mean is represented by the horizontal line appearing just below the y-axis' value of "6," while the other two horizontal lines represent the regions commencing one-half standard deviation above and below the mean. As is evident from Figure 6, all the average scores are near the top end of the Likert 7-point scale. In addition, all 35 items appear within one-half of a standard deviation of the overall sample's mean score of 5.95. In other words, none of the average question responses deviates significantly from the overall mean and therefore none of the items can be interpreted as being of much greater or of much less importance than any others. Furthermore, a repeated measures ANOVA was conducted. However, although significant differences were noted, the

sheer number of *post-hoc* comparison tests undertaken creates significant Type 1 problems (Jaccard, Becker, and Wood, 1984). As a result, we decided not to pursue all 35 items separately but instead to use the data about the 35 items under the nine themes listed in Table 4.

Table 4. Themes associated with Learning Satisfaction in order of Students' Importance

1	Theme D	**Teacher communication**. The lecturer speaks clearly, explains content well, speaks at an easy to follow pace, speaks without a monotone, uses clear explanations and definitions and sticks to the topic.
2	Theme E	**Teacher empathy**. Shows respect to students, helps students feel comfortable to ask questions, genuinely cares about learning, and ensures good class understanding before moving to new material.
3	Theme G	**Teacher learning support**. Relevant lecture materials are available before class, the lecturer is accessible outside of class, and there are relevant examples to work through after class.
4	Theme C	**Physical learning space.** The room is at a suitable temperature, has comfortable furniture, there is adequate lighting, has a good sound system, is clean and tidy, and has good Wi-Fi available.
5	Theme A	**General environment**. The lecture is not interrupted by outside noise, short walking distance between subsequent classes, convenient timetable for classes and tutorials.
6	Theme H	**Teacher-provided learning material**. The lecturer makes lecture slides available on blackboard before class, provides podcasts, uses lecture slides to introduce, present and summarise lecture material.
7	Theme F	**Teacher involvement**. There is good interaction between the class and the lecturer, the lecturer is enthusiastic about the subject, and the lecturer makes going to class interesting.
8	Theme I	**Textbook support**. Textbooks complement other learning material, they provide further detail on lecture topics, end-of-chapter questions can be used to check learning, textbooks related well to the lecture.
9	Theme B	**Peer support**. Discussion amongst students, smaller groups for study, equal contribution from participants.

Figure 6. Graph of the mean responses to the 35 survey items, grouped into themes, showing overall average, and limits of half a standard deviations from the overall average

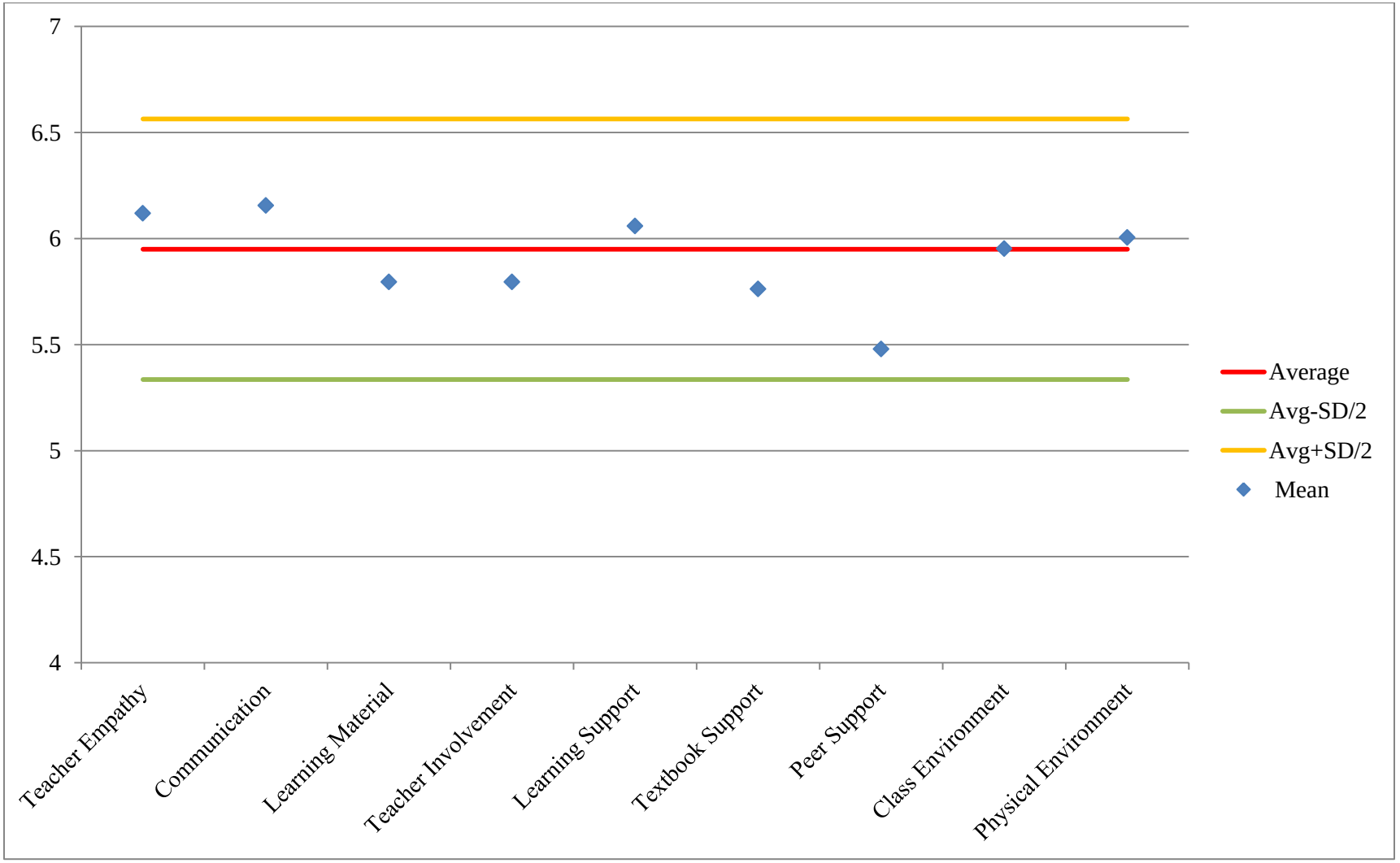


Supporting the decision to rely upon these nine themes/groupings were the results from running factor analysis. In particular, a single factor was uniformly observed for each of the nine groupings. Furthermore, the Cronbach alphas for the sets of items comprising five of the factors (i.e., themes B, C, D, E, and I) were all above the commonly accepted level of .7 (Nunnally, 1978). For four of the factors (i.e., themes A, F, G, and H), the Cronbach alphas were .66 or above. As Cortina (1993) notes, the acceptable levels of Cronbach alphas must be viewed in combination with the number of items comprising a given scale. The four themes that just barely missed the .7 threshold all featured only three items. Consequently, it was deemed that the achieved levels of reliability were sufficient for treating the nine themes as adequately robust for their use in further statistical analysis.

Figure 7 is a graph of the means of the nine learning satisfaction themes. Once again, the overall mean score is represented by the horizontal line appearing just below the y-axis' value of "6," while the other two horizontal lines represent the regions commencing one-half of a standard deviation above and below the mean. As is evident from Figure 7, all the means are contained within the upper and lower boundaries. However, the statistical tests described next gave credence to the probability of the means being significantly different enough as to indicate some order of rank. Thus, we used these means to put the nine themes in descending order of importance in Table 4, but with the proviso that all are important.

The statistical testing just alluded to involved a repeated measures ANOVA. Because of the high number of significance tests being conducted, we employed a more stringent significance level of $p<.01$; even so, the analysis shows that nearly all of the 72 pairings are significant. The only eight exceptions are for the pairings between empathy and communication, empathy and teacher involvement, learning material and peer support, learning material and the general environment, teacher involvement and the physical learning space, textbooks and the general environment, textbooks and the physical learning space, and the general environment and the physical learning space. Bar the one exception between teacher involvement and the physical learning space, all the nonsignificant pairings are between teacher-based factors (i.e., teacher empathy, teacher communication, teacher provided learning materials, teacher involvement, and teacher learning support) or non-teacher factors (i.e., textbooks, peer support, general environment, and physical learning space). In other words, there appears to be a clear divide between teacher-based and non-teacher factors, with the former being consistently rated higher than the latter—we analyse this matter further in S3.4.1.

Figure 7. Graph of the average response per learning theme question relative to the overall sample mean and within one-half of a standard deviation above and below the mean



Environment, Teaching and Learning

Moving on now to the relationship between the learning environment and good teaching generally, and proficient and effective lecturing, and so effective learning, in the accounting discipline in particular, Lord and Robertson (2006) argue:

> *If teachers can establish a positive and supportive learning environment and embed within it an aligned curriculum that encourages deep and discourages surface learning through its choice of learning activities and assessment, then there is a greater likelihood of students achieving high quality learning outcomes. (p. 44)*

Similarly, Ballantine et al. (2016) argue that:

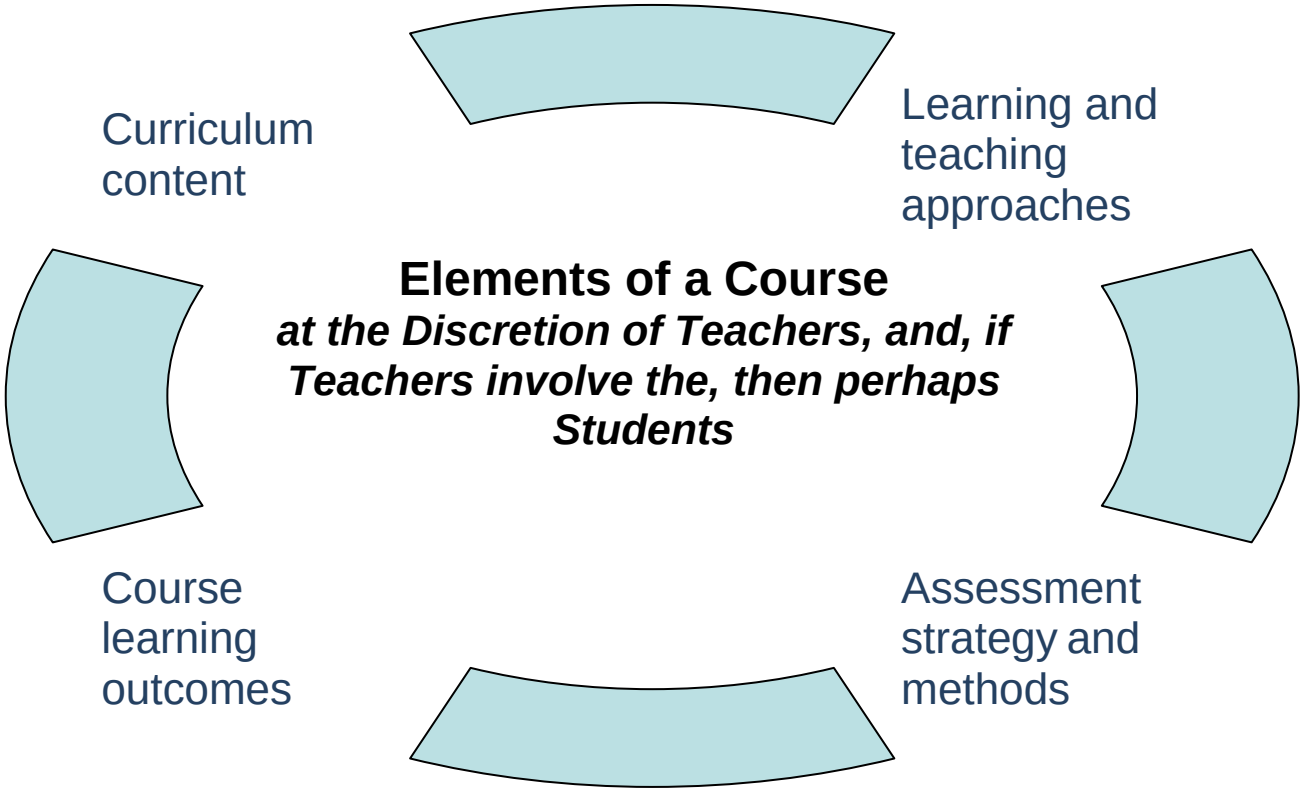
> *business educators should create an appropriate learning environment by adopting teaching and assessment strategies which optimize students' learning approaches towards deep and strategic characteristics. In so doing, the expectation is that enhanced analytical and conceptual thinking associated with desirable learning will stimulate ethical reasoning to facilitate more informed judgment with respect to ethics-based workplace dilemmas. (no page no.)*

The authors of both these studies are among a significant but minority voice in the accounting discipline who advocate that to improve the learning environment, in order for learning effectiveness among students to be increased, there needs to be less lecturing and the lecturing needs to be of a different kind. A similar rationale applies to the other elements making up a course, as we represent in Figure 8. However, it is even more widely recognised, implicitly as much as explicitly, that academics as teachers cannot achieve this unless they take the students with them, or the students become accepting of any new environment and perceive it, and the associated changes, including their roles, responsibilities and activities, to be apposite.

On course delivery methods, results of a survey by Paisey and Paisey (2004a) show that students are most concerned about receiving knowledge from the lecturer, with class size perceived as having low importance. They find that critical to teaching effectively is the lecturer informing students about the topics that will be covered in tests and exams. For example, Hill (1998) found that students who attended large classes outperformed those in small classes. She also found that class size had no bearing on students' perception of lecturing effectiveness and interest in accounting, although students preferred small classes. However, class size is a contentious issue as there is a perception among many academics and students that having small classes will result in enhanced lecturing effectiveness and student learning. For instance, Murdoch and Guy (2002) found that, in an introductory accounting course, students in small classes outperformed those in large classes.

Figure 8. Design Elements30 of a Course, with the Possibility of either Teacher-Centred or Student Centred Design (developed for this project)

In crafting Figure 8, we considered labelling the central area “Elements of a Course at the



Discretion of Teachers, perhaps Administrators and even Students”. However, we are of the view that the administrators are not so much involved in course designs as in setting boundaries for these designs and the staging of courses once designed. This is in addition to supporting the designing and staging of courses, the work of academics and general staff, and the lives of students (e.g., in matters of recruitment, enrolment, accommodation, study, pastoral care, recreation, entertainment, health and safety, finance). It is also in addition to, but to some extent in parallel with administrators setting boundaries for the academic and non-academic behaviour of students.

In the matter of boundaries, and boundary control (Simons, 1995), these have always been dynamic or in a state of impermanence in universities. However, it is generally recognised that in the past three decades there has been a paradigm shift towards the *New Higher Education* (Knight & Trowler, 2000; Olssen, 2002)) that has followed hard on the heels of the *New Public Management* (Deem et al., 2007; Lawrence & Sharma, 2002). Features affecting our workplaces have included the Equivalent Full-Time Students (EFTSs) Funding System (Coy, Tower & Dixon, 1991) and the Performance-Based Research Fund (Dixon, 2015), which are formula based funding mechanisms and presently constitute the main sources of funding for our universities. More localised features include our universities’ credit points system for regulating degrees, courses and learning outcomes, student workloads and, when allied with the EFTS Funding System, internal funding allocations (Dixon, 2012); and workload planning models for

[30] Interestingly, Cannon and Newble (2000) claim that for students, the learning environment comprises the teaching, learning materials and assessments they experience, which we believe coincides with this model. However, such a claim coincides with the container analogy of “learning environment” rather than the weave analogy (see Anderson and Day, 2005).

mandating and controlling the work-time of academics. These boundaries affect the learning environment in various ways, giving academics and the discipline-based departments they work in much discretion, including in the content of programmes and courses, the approaches to teaching and learning, methods of assessment, etc. However, at the same time, the boundaries limit time, resources, choices, etc. Examples mentioned already include the university calendar, the university timetable, the architecture and normal layout of rooms. Other limits arise through policies on teaching, assessment and research; and through time allowances, if any, to complete tasks associated with the design of courses, and preparing and staging lectures and tutorials. Another form of limit is the omission from workload questionnaires of spaces to insert time spent on lectorials, lessons, seminars or workshops; any academics having the temerity to use these forms of class in their teaching usually do so during periods officially labelled lectures, and often hold them in lecture theatres or rooms normally set out for lectures.

Student satisfaction is further affected by the impact of the academic department. Culture and climate within the department impacts on student learning and satisfaction (Umbach & Porter, 2002). Department gender diversity, student contact with faculty, and departmental research emphasis are significantly related to student satisfaction. Karna and Julin (2015) find that student satisfaction with facilities and services contribute to the strategic value of the working and learning environment. McLaughlin and Faulkner (2012), who note that flexible learning spaces are important to students, endorse this.

This brings us to the physical learning environment, which naturally, being accountants, we see as some function of accumulated capital expenditure on land, buildings, plant and equipment, arising from some hodge-podge of past decisions and actions through which facilities were created and financed (perhaps they were labelled investments, investment plans, campus master plans, etc.); and of operating expenditures affecting their state of repair, cleanliness, warmth, etc. In the focus groups we conducted, students remarked on how rooms they use for classes need to be at a suitable temperature, have comfortable furniture and be adequately lit, and be fitted with the technology they have become used to, but that was about the end of it. This list reflects projects and literature on the matter of learning spaces (e.g., see de la Harpe, Fraser, Mason & Hurford, 2014; Karna and Julin, 2015).

In reviewing this literature, Temple (2008) notes how little understanding there seems to be about the relationship between space, and teaching and learning. He identifies strands that he categorises as matters of (1) campus design, (2) the relationships between space and community, (3) specialist spaces needs, and (4) how ideas of space, and activities for which spaces are used, have been revised as new technology has spread. Our impression is that at the level of departments and the academics in them, most of the interest is in the topics labelled (3) and (4). Regarding (3), universities are seen as reasonably well-provided for in terms of lecture theatres and other rooms normally laid out for lectures and tutorials, and that if there is a deficiency it is in tailor-made spaces for group work and similar student-centred-learning type activities (McLaughlin & Faulkner, 2012). Discussion of this deficiency usually accompanies advocating of these activities and this type of learning (e.g., see Adler et al., 2000). Regarding (4), as reflected in the volume and range of literature, the rapid advances in technology have significantly changed how space is perceived for lectures, and all other forms of classes for that matter.

Some examples of this literature, to bring out its range and tenor, are the following. Sugahara and Boland (2006) investigated the effectiveness of using PowerPoint (which dates from the mid-1980s) in accounting classes and found that while this technology has reduced the need for students to take notes during lectures, students also find it distractive. They report a negative correlation between accounting students' preference for PowerPoint lecture material and exam marks, which suggests technological innovation within the learning environment is not always beneficial. In another study involving PowerPoint lecture notes, Nouri and Shahid (2008) put forward evidence to show that lecturers who provide such notes are perceived by students as less receptive to student concerns, not using the class time efficiently, and are less effective teachers than those who do not provide them. They attribute these perceptions to note-taking being a form of recitation and a means of students being more active in classes than if the notes were given them. Li (2011) inquired about the use of and student opinions about classroom response systems (epitomised in handheld keypads or clickers), which in its present electronic form dates from the 1990s (there were versions in the 1960s), and obtained mainly positive results, especially among students who were ill-disposed towards the style of traditional lecturing—clickers meant that having to

speak up in class, which shy ones found intimidating and critical/outspoken ones found risky, was not the only or main way the students could participate. Li's study was in psychology classes; for studies based on accounting classes with positive and other opinions from students, see Premuroso, Tong and Beed (2011), and Carty and Baker (2014). For further listings and short reviews of other educational technologies in accounting classes, see Apostolou, Dorminey, Hassell and Rebele (2015) and the predecessor reviews it lists as "accounting education literature review series" (p. 71).

In addition, these rapid advances in technology has created the potential for reconfiguring the place of classes in courses and for replacing classes altogether—of course, distance learning using learning programme manuals has been a possibility for many years in readying students for professional accounting exams (e.g., Rapid Results College – see RRC International, 2016). Bond, Czernkowski and Wells (2012) used a blended learning approach that included team teaching, live lecture recordings, 'drop-in' workshops, and Blackboard® discussions, which all helped to transform a typically 'dry' subject into an animated learning experience. They show that shifting away from the traditional lecture-based delivery to include short videos, spotlight on current topical issues and real-world applications of accounting theory helps student concentration and improves engagement in lectures. López-Pérez, Pérez-López and Rodríguez-Ariza (2011) find that blended learning of traditional classroom methods and online learning increases student motivation. However, a substantially different approach is advocated by Lin, Ho, Sadiq and Orlowska (2002) who more than a decade ago now were advocating that, "The challenge is not to use new technologies to re-create traditional education systems, but rather create new learning environments, providing improvements to both teachers and students, and enhance the quality of education" (p. 116).

Characteristics to Help Understand Students as Learners

Coming to an understanding of people, or more specifically students, as learners seems vital to performing the vocation of teaching in ways that aim to bring about effective learning (Memmott & Brennan, 1998). Indeed, Fincher (1998) posits that student characteristics, perceptions and perspectives are major factors within the learning situation: students are heterogeneous, including as to beliefs, values, motives, wellbeing, ability, and prior knowledge, skills and experience (re prior content knowledge and metacognitive knowledge of accounting students, and their impact, see Tan & Laswad, 2008). Furthermore, Dresel and Rindermann (2011), and Worthington (2002) present some evidence that some individual and group student characteristics affect SET ratings, including that the more diverse the characteristics across a student group, the greater the probability of ratings being lower.

When designing and staging a particular course is the situation in which academics most often face the prospect of having to come to an understanding of students. However, reaching such an understanding for the first presentation, let alone maintaining it from one course presentation to the next, even in an iterative or experiential manner, requires effort and resources on the part of the academic concerned, and they may prefer or be obliged to expend these elsewhere, such as on research and publishing Thus, this understanding can get neglected. Besides, students are so diverse in characteristics, perceptions and perspectives that understanding each of them individually or all of them collectively is extremely difficult, if not impossible. Not only that but also coming to an understanding of students may be no more fruitful than simply treating students as if they are impersonal objects decorating the academic environment. Or, the academics may treat them as if they were a homogenous group, similar in nature either to the academics themselves, except a little younger, or to what each academic now sees as him or herself when he or she was at university a few years or a few decades ago. Kember and Kwan (2000) note attitudes of unawareness and apathy among academics to student characteristics and associate them most with academics who conceive teaching as transmitting knowledge to students and who take content-centred approaches to teaching (see milk pitcher and banking analogies remarked on in S3.1.2).

One possible reason why accounting and finance undergraduates are less satisfied with their tertiary education experience than that of other undergraduates is that they have unique learning needs, which accounting and finance academics have not adequately taken into account when designing and delivering accounting courses. While there is scant empirical evidence on the uniqueness of the learning needs of accounting and finance undergraduates, there is empirical evidence indicating that the characteristics and

perspectives of students who choose to study accounting and finance are different from those who choose other disciplines. For example, compared to students of other disciplines, accounting and finance students are less creative, are more technically minded (Saemann & Crooker, 2000) and have more fact-oriented personalities (Swain & Olsen, 2012). A study of accounting and non-accounting students at a New Zealand university also found numerous differences between the two groups, particularly in terms of personal beliefs about accounting (Tan & Laswad, 2006, 2009). However, it is an open empirical question whether and how accounting and finance academics take the characteristics, perspectives and learning needs of their students into account.

Keeping these issues in mind, this section examines matters related to how to come to an understanding of students. We start by distinguishing students and ways to describe them, incorporating some findings reported in S3.3.1 about what gives students satisfaction. Using the data we collected about students at our universities (S2.4 to S2.5), we then go on to consider: How do learning satisfaction themes vary in importance according to student characteristics (3.4.1)? What learning styles do they exhibit and whether these change (S3.4.2)? And what learning approaches do they use and whether these change (S3.4.3)? We wrap up the discussion with a synthesis of these matters (S3.4.4).

We preface this examination by saying that relative to research about disciplines, learning environments and educators, there is relatively less research examining how learning is impacted by student characteristics, perceptions and perspectives (Fincher, 1998). Even so, from perusing the literature, we noticed quite a varied list of what pass for *student characteristics*. Entwistle and Tait (1990) categorise these, as shown in the array in the top half of Figure 5, dividing them cautiously between several types of characteristics that particularly influence students' learning styles (i.e., personality, cognitive style, intellectual abilities and knowledge and conceptions), and types of characteristics that particularly influence students' learning approaches (i.e., personality motivation and work and study habits). However, before going into these too deeply, we shall relate some basic observations from our workplaces, not supposing them to be untypical of other universities in New Zealand or accounting programmes, etc. in similar places (re United States, see Nelson, Vendrzyk, Quirin & Kovar, 2008).

From observations in our workplaces, students in general, and accounting students in particular,[31] are diverse as to these characteristics, as well as in their perceptions, their perspectives and their study choices. Drawn from the wider human population mainly living within the traditional catchment provinces of the university (i.e., the regions/provinces of Otago/Southland and Canterbury/West Coast/Marlborough) but from much further afield as well (including New Zealand as a whole and the Pacific-Asia region), they become students by entering the university. They do this primarily in order to learn,[32] rather than to teach or administer, so giving rise as far as they are concerned to the notion of the university forming the wider learning environment.

In such personal characteristics as age, gender, sexual orientation, social class, physical abilities and limitations, domestic circumstances, employment circumstances, skin colour, race, ethnicity, culture, first language and linguistic competence, and religion, our students resemble the national population. Except

[31] By accounting students, we mean those on programmes aspiring to an accounting bachelor or taught master degree, or membership of a professional accounting body; and those on programmes where seeking to acquire accounting knowledge is incidental to knowledge suitable to or appropriate for other purposes (e.g., general business and management, engineering).

[32] While it is rash to generalise, one would hope and expect that learning is what the vast majority of students do have in mind, whether manifesting as a qualification or as anything else equating to "a process of acquiring and integrating . . . varying forms of knowledge, skill, and understanding that the learner may use or apply in later situations and under conditions different from those of instruction" (Fincher citing himself in Fincher 1998, p. 58). We appreciate that some people enter university intending to learn but are prevented from doing so because of personal or other circumstances, often unforeseen when they enrol; and a tiny number take on the guise of students in order to keep their parents happy, or obtain money from student allowances, or legitimise their otherwise bogus immigration status, etc.

they are much younger (over 80% are under 22 years old),[33] lacking in independent means, far less likely to be parents, a bit less likely to have previously resided in the province and a bit less likely to be citizens or permanent residents of New Zealand. Compared with the populations of accountants and of accounting and finance academics, their gender mix is more even, probably—indeed, 54% of the students who participated in our surveys were female.

Compared with people of their own age of New Zealand birth or primary and secondary schooling, they have performed better at secondary school, which is where most were immediately before entering university, and so they enter university as undergraduates. This better performance, and other characteristics (e.g. the education, career and background of their families, particularly their fathers), reflect that they are probably from better off social backgrounds, and so a little whiter, more European in culture and have English more as their mother tongue. However, there are exceptions to this mass of undergraduates that has arrived straight from school. They include undergraduates who have transferred from another university; and undergraduates who have been in employment or have other business and life experiences (e.g., aid volunteering, world travel, raising a child) since leaving school, and so are older than the majority, but not noticeably so—less than 3% of the participants in our surveys was over 30. As undergraduates, most will have chosen a major, possibly in accounting/finance, or another business discipline or otherwise, and they will vary in the stage of undergraduate study (i.e., pass stage/stage 1/100-level or advanced/stage 2–3/200–300-level) reached.

They also include a few postgraduates, some who have carried on straight from undergraduate study at the university, and others who graduated with bachelor or master degrees from other universities, recently or a few years earlier. These different levels of study are indicative of our students not only having different levels of knowledge—one expects students in semester 1 of a six semester bachelor degree to have far less knowledge than students who are graduating, or doing postgraduate courses—but also different intellectual ability—even after graduating with their bachelor degrees, only a minority of students seem to have the intellectual ability, let alone the means or motivation, to study at postgraduate level.

As alluded to above, a minority of students are not national: they have come to New Zealand from various other countries either especially to attend university or to complete a few years of secondary schooling before enrolling at university. They, their families or their sponsors pay much higher, international fees, for which some may receive or may expect additional privileges compared to the majority. They also vary from the majority in race, ethnicity, culture, language, religion and, perhaps, social class, particularly if they or their families are paying their fees; and in their understanding of the national (bi)culture of New Zealand[34] and organisational culture of their university. In addition, they may struggle in their understanding of the cultures exhibited both by the national majority of students and by others in the non-national minority, just as the national students may struggle to understand the cultures of the non-national minority. These cultural differences can be just as much a valuable learning experience, and a source of learning resources for teaching, as they can a source of difficulty for teaching and learning.
Students enter the learning environment, commence this new phase of learning, and develop into university learners in various contemporaneous ways. These ways usually involve experiencing various orientation events, functions, processes, etc., staged by student bodies, administrative units and academic units at university, programme and departmental levels. These are before or at the time they first enter the university and as they resume, following breaks in classes between terms, semesters and academic years; the resumptions for a new semester and each new year usually involves not only new courses of learning but also can involve higher levels of learning. Although by entering the university a person has become a student, they will also have other roles as their lives continue outside the university

[33] A table and charts of the genders, ethnic ancestry and ages of the students who participated in the written questionnaire surveys for this study are provided in Tables 18 and 19, and Figures 21 to 24 in Appendix B. All these students were undergraduates, mainly in their first year of study. Even so, with so few postgraduates, their ages are indicative of the ages of students whom we teach.
[34] Further to notes 7 and 8, New Zealand is said to be bicultural, being a recognition of the culture of Māori and of *Tangata Tiriti* (i.e., the many peoples in New Zealand there by virtue of the Treaty of Waitangi)

particularly during these breaks but during periods when university classes are in session as well; this includes their employment status (i.e., in paid employment or not working).[35]

While at the university, each new course a student studies means coming into contact with an academic for the first time or after an elapse of time, for example, because within the same undergraduate programme an academic stages a first year course and a third year course, between which the student has done other courses. A new course also usually means a change in the composition of the class members and so in the friends, acquaintances, strangers, etc. with whom a student shares the classroom. The academic(s) running each course and staging or conducting or facilitating the course will have drawn up some form of design, or have a design in mind, usually covering most of the matters or elements arrayed in Figure 8.

Except to say that the academic(s) instructs or guides the student in engaging with the course and its various facets, and the student learns through direct contact with these facets, including other students, we will not repeat what we have already said in S3.3 in conjunction with Figure 8, or what we said about lecture classes, lecturing and courses in S3.1 and elsewhere. However, it is worth reflecting on these matters from the perspectives of students individually and collectively. First, one could ask what perceptions do students have of the learning environment (see S3.3); and, second, what have students come to understand as being expected of them in that environment (e.g., to go to lectures to listen to the lecturer, take notes and otherwise absorb individually, unless invited to confer with other students or enter a discussion with the lecturer and the rest of the class, to go to tutorials, to visit the library and surf the Internet to consolidate what they were told and what they noted). Building on those, further questions to ask are what actions and what behaviours do students expect of the academic? Indeed, the question of what roles do students expect academics to play is vitally important; for example, see Figure 9 for some possibilities, and to them one can add learning environment manager (see S3.3.1). And how do students stand vis-à-vis academics—are they collaborators in learning, or know-all master and know-nothing pupil, or somewhere either in-between or elsewhere altogether (Fuhrmann and Grasha, 1998)?

We referred in S3.1.1 to the work of Cunningham (2011), who uses the analogy of theatre and tours behind-the-scenes in analysing and interpreting the staging of a large-lecture, introductory accounting course. Her discussion of the characteristics of the audience prompt observations that before a course starts the students may peruse information about the academics appearing in the course, or who are part of the staging crew, along with information about the course, such as the plot and the structure of events, and other information to increase their understanding and enjoyment. Conversely, she notes while students can usually cope with knowing about their academics, academics are unlikely to find it easy or efficient to find and read the individual information about their students. Instead, such considerations as the ratios and distributions of the different dimensions of personal characteristics mentioned above (i.e., gender, age, linguistic competence, life and business experience, etc.) may help. She also offers the following list:

- Mix of student majors
- Students' familiarity with each other
- The presence of student leaders
- Lecture-going experience
- The demands to be made on the students. (Cunningham, 2011, pp. 817–818)

[35] Although some students are part-time students (i.e., studying less than 80% of a normal full-time load of 60 credit points in a semester) and are combining study with work, many full-time students are also in work during periods when university classes are in session. Many students attribute doing this to the costs of study and the undesirability of leaving university with a so-called student loan to repay to the tax authorities.

Figure 9. The 12 Roles of the Teacher

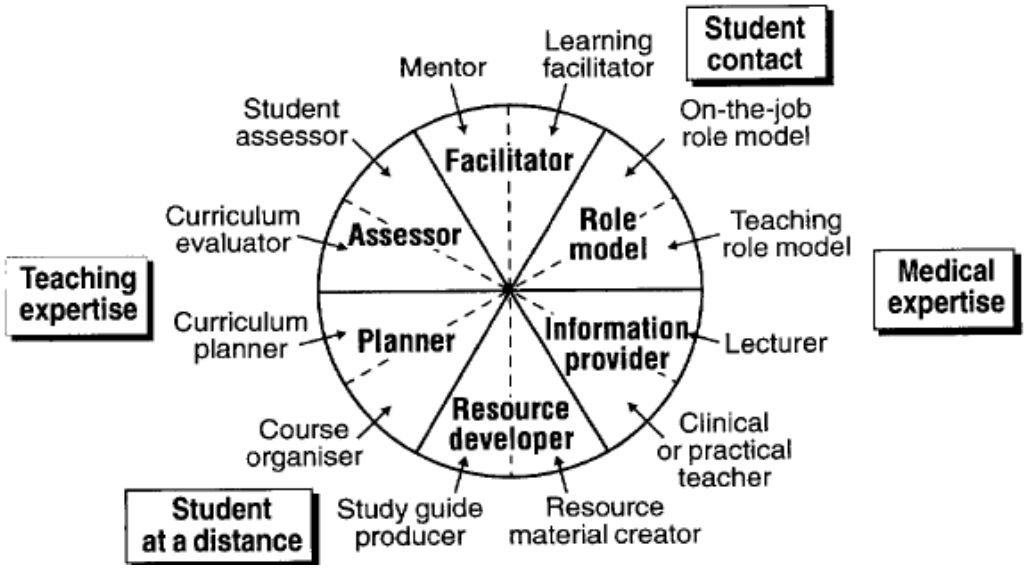


Figure 9 is reproduced from "AMEE guide no. 20: The good teacher is more than a lecturer—the twelve roles of the teacher," by R. M. Harden and J. Crosby, 2000, Medical Teacher, 22, p. 336. Copyright 2000 by Taylor & Francis.

In referring to the heuristic model of Entwistle and Tait (1990) (see Figure 5) and enumerating several types of student characteristics above (i.e., personality, cognitive style, intellectual abilities and knowledge and conceptions, motivation and work and study habits), we made reference to students' learning styles and to students' learning approaches. The latter tie in with the question of the perceptions that students have of learning. These differ among students, and probably among students from one discipline to another (see S3.2). In relation to accounting students, Lord and Robertson (2006) show that in a Stage 3/300-Level course in New Zealand, the students conceive learning as ranging from acquiring a stock of knowledge from a repository (e.g., the lecturer, textbook, library), which they can then demonstrate by being able to reproduce and apply the knowledge (see also Sharma, 1997), to being able to analyse, evaluate and create the knowledge themselves. Lord and Robertson claim the latter form of learning involves students in expending effort to make sense of ideas for themselves by relating them to their previous knowledge and experience. When applying this learning approach, students are able to transform information into personal meaning. In contrast, learners who apply a surface approach to their learning view the learning process as being more a function of the teacher than what the learner him or herself offers. Consequently, the learning stops short of promoting the highest conceptions of learning: when learners see something in a different way and find themselves changed as a person. We return to these matters in S3.4.3.

Gender, Age and other Differences among Students

In S3.3.1, we used responses about the nine learning satisfaction themes in our questionnaire to draw inferences about student perceptions of their learning environment. Here we extend that analysis but to consider how variations in student characteristics are associated with the importance that students attach to each theme. To do this, we distinguish from the rest those responses that ranked a theme as either 6 and 7 on the Likert scale, and so calculated the proportion of respondents at or above the Agree threshold. We did the calculations for all respondents and for respondents by gender, major (i.e., accounting/finance and non-accounting/finance major), stage of undergraduate study (i.e., pass stage/stage 1/100-level or advanced/stage 2–3/200–300-level), first language (i.e., English or the Rest), living accommodation (i.e., university halls or other accommodation) and employment status (i.e., in paid

employment or not working).[36] The cross tabulation results show a clear gender effect. Female respondents rate seven of the nine learning themes significantly higher than male students. The results are given in Table 5.

The results in Table 5 demonstrate that each of the learning themes are valued quite highly by the student population and, while there is some variation between the groups, the overall results suggest that each of these components of student learning effectiveness is valued highly.

The results also show a clear gender difference for seven of the nine learning themes. Female students place more value on teacher empathy, communication and learning material compared to male students. Learning and textbook support as well as the study environment and physical learning environment are also more important to female students. We are not the first to point out gender differences among accounting students in New Zealand. Tan and Laswad (2008) found that female students performed better than male students did, suggesting that the females who choose to study accounting differ in learning skills and cognitive abilities from their male counterparts. Their suggestion is confirmed by our results.

Other things the results show include the following. Accounting majors value the learning material and support for the course more highly than non-accounting majors—this will be no surprise to most people who have had to stage large-lecture, compulsory courses in accounting for non-accounting majors and been met with resentment from many people in the audience. The physical learning environment is important for first year students. Students for whom English is not their first language place more value on learning support.

The data used in Table 5 are explored more rigorously using a mixed-design ANOVA, where the nine different learning themes are the repeated measure and gender, major (accounting or non-accounting), year of paper, and university (Otago or Canterbury) are the between measure effects. The difference between the nine different learning themes was significant, as has already been reported. In addition to the significant differences across the nine themes, the present ANOVA showed that there are significant within-subjects interactions between the nine themes and each variable of gender, year of paper, and university. In other words, the responses from the same individual across the nine themes was moderated by whether the student was female or male, at Otago or Canterbury, and studying first, second, or third year papers. These interactions are examined more closely in the various sub-analyses that follow.

[36] Although some students are part-time students (i.e., studying less than 80% of a normal full-time load of 60 credit points in a semester) and are combining study with work, many full-time students are also in work during periods when university classes are in session. Many students attribute doing this to the costs of study and the undesirability of leaving university with a so-called student loan to repay to the tax authorities.

Table 5. Rankings of Learning Themes according to Students' Personal Characteristics

Rank		Learning Themes	Total	Female	Male	ACCT Major	Non-ACCT Major	First Year	Not First Year	English	English is not 1st language	Lives in College	Lives outside College	Employed	Not Employed
			548	292	252	264	284[x]	244	304	410	139	176	372	187	361
			%	%	%	%	%	%	%	%	%	%	%	%	%
1	D	Teacher communication	90	94[a]	86	90	90	90	90	89	94	91	90	88	91
2	E	Teacher empathy	90	92[a]	87	90	90	89	91	89	92	91	89	92	89
3	G	Teacher learning support	83	88[a]	77	87[b]	80	81	85	81	89[b]	86	82	80	84
4	C	Physical learning space	86	90[a]	81	86	85	88[b]	84	84	90	89	84	83	87
5	A	General environment	80	83[a]	79	82	80	82	80	79	86	80	81	80	81
6	H	Teacher-provided learning material	72	81[a]	62	75[a]	70	74	71	70	79	73	72	73	72
7	F	Teacher involvement	90	92	88	90	90	91	90	91	88	90	90	91	90
8	I	Textbook support	76	79[b]	73	80	73	75	77	77	75	73	78	76	76
9	B	Peer support	64	63	64	65	62	63	64	61	70	62	64	67	62
All			81	85	77	83	80	81	81	80	85	82	81	81	81

The Learning Themes are shown in rank order of means, as per Table 4. The percentages represent the proportions of students who ranked the themes as either Important (6) or Very Important (7). The following notation indicates levels of correlation: [a]correlation is significant at the 0.01 level l (two-tailed); [b]correlation is significant at the 0.05 level (two tailed). [x]The non-Accounting majors includes 21 Finance majors.

Regarding the nine-theme model, the between-subjects ANOVA part of the mixed-measures design reveals a significant main effect for gender (p<.01) and a marginally significant difference for major (p<.1). The relevant SPSS ANOVA output is displayed in Table 6 and shows that males and females provide significantly different ratings on the nine themes. Females rate eight of the nine themes higher than males, with only teacher involvement being rated slightly higher by males than by females; this is evident graphically in Figure 10.

Table 6. SPSS ANOVA Output for Nine-Themes Model

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Intercept	87733.937	1	87733.937	31592.978	.000
Gender	33.991	1	33.991	12.240	.001
Major1	8.685	1	8.685	3.128	.078
Year_of_paper	4.657	2	2.328	.838	.433
University	13.885	1	13.885	5.000	.026
Gender * Major1	2.096	1	2.096	.755	.385
Gender * Year_of_paper	5.219	2	2.609	.940	.391
Gender * University	1.382	1	1.382	.498	.481
Major1 * Year_of_paper	19.020	2	9.510	3.425	.033
Major1 * University	10.612	1	10.612	3.821	.051
Year_of_paper * University	.000	0	.	.	.
Gender * Major1 * Year_of_paper	.951	2	.476	.171	.843
Gender * Major1 * University	.230	1	.230	.083	.774
Gender * Year_of_paper * University	.000	0	.	.	.
Major1 * Year_of_paper * University	.000	0	.	.	.
Gender * Major1 * Year_of_paper * University	.000	0	.	.	.
Error	1438.490	518	2.777		

Table 6 shows the between-subjects SPSS ANOVA output. The nine learning themes are used as the repeated measure, and gender, major, year of paper, and university are used as the between-subjects factors.

Drawing upon the earlier observation that the average student ratings on the nine themes seem to group into teacher-based themes and non-teacher themes, the mixed-measures ANOVA design is repeated. However, on this occasion only the two theme-types are used instead of the nine themes. The results reveal largely similar findings to the nine-themes model. First, there is a significant difference within each survey participant's ratings of the two themes. Second, there are significant within-subjects interactions between the two themes and year of paper and university. Gender on this occasion was not found to have a significant moderating effect. The significant interactions are examined in more detail using the sub-analyses that follow.

The between-subjects analysis reveals a significant main effect for gender (p<.01) and university (p<.05), and a marginally significant difference for major (p<.1). As Table 7 shows, males and females, as well as Otago and Canterbury students, provide significantly different ratings on the two themes. Females and Otago students consistently rate both themes higher than males and Canterbury students, as shown graphically in Figure 11 and Figure12, respectively. Meanwhile, for accounting majors, while rating both themes higher than non-accounting majors, the difference is much larger for non-teacher themes than teacher-based themes. The latter is almost identical between the two groups of majors, as shown graphically in Figure 13.

Figure 10. Comparison of Learning Theme Means by Gender

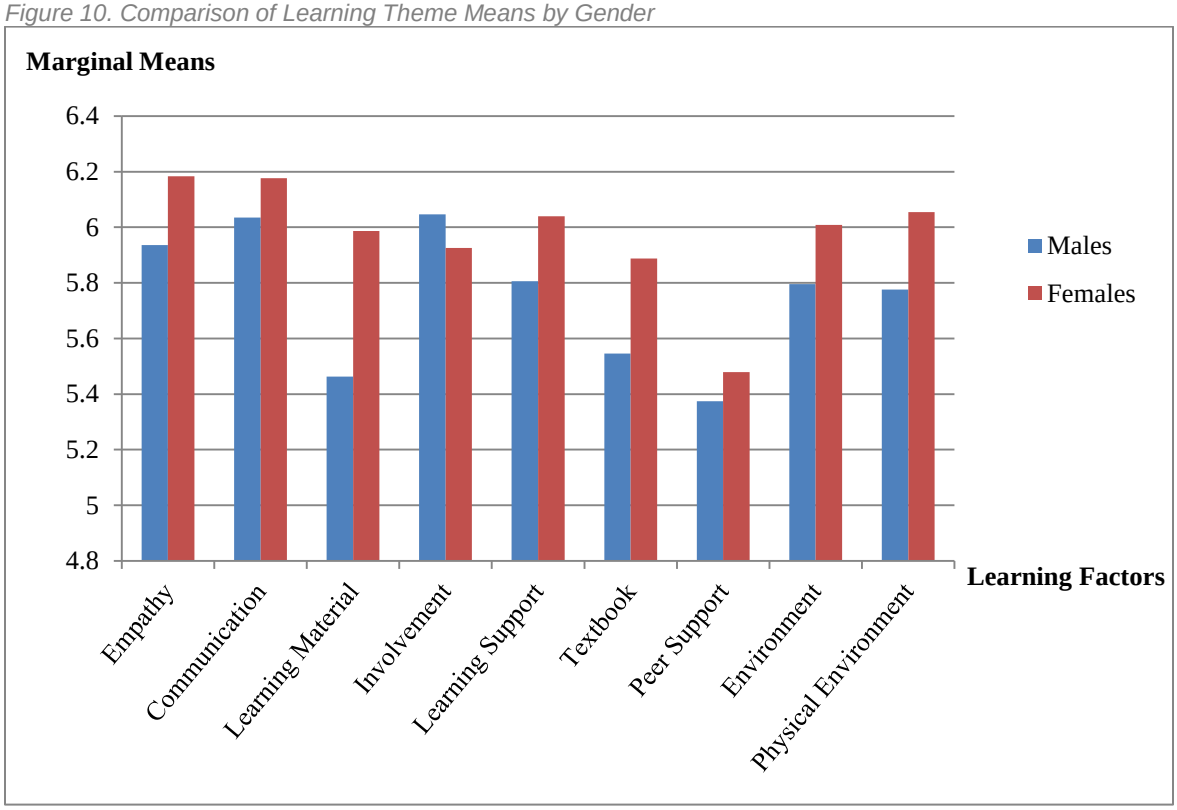


Figure 10 shows the between-subjects main effect for gender across the nine learning themes.

Based on the findings that significant differences between student ratings occur for gender, university, and major, but not for year of study, additional analyses to further examine the first three factors were undertaken. Since year of study was not found to be a significant between-subjects variable, and since the Otago sample had a substantially higher number of survey participants and a more evenly distributed sample of accounting and non-accounting students for supporting subgroup analyses focussing on major of study, the next set of analyses focuses on Otago students only. As a reminder, the Otago students surveyed were all first year students studying one of two core business papers: a marketing paper and/or an accounting paper.

Table 7. SPSS ANOVA Output for Two Theme-Type Model

Source	Type III Sum of Squares	Df	Mean Square	F	Sig.
Intercept	19400.806	1	19400.806	31222.216	.000
Gender	7.730	1	7.730	12.441	.000
Major1	2.102	1	2.102	3.382	.066
Year_of_paper	.960	2	.480	.772	.463
University	2.570	1	2.570	4.135	.043
Gender * Major1	.387	1	.387	.623	.430
Gender * Year_of_paper	1.177	2	.589	.947	.388
Gender * University	.322	1	.322	.518	.472
Major1 * Year_of_paper	4.080	2	2.040	3.283	.038
Major1 * University	2.015	1	2.015	3.242	.072
Year_of_paper * University	.000	0	.	.	.
Gender * Major1 * Year_of_paper	.172	2	.086	.138	.871
Gender * Major1 * University	.057	1	.057	.093	.761
Gender * Year_of_paper * University	.000	0	.	.	.
Major1 * Year_of_paper * University	.000	0	.	.	.
Gender * Major1 * Year_of_paper * University	.000	0	.	.	.
Error	321.874	518	.621		

Table 7 shows the between-subjects SPSS ANOVA output. The two types of learning themes are used as the repeated measure and gender, major, year of paper, and university are used as the between-subjects factors.

Figure 11. Comparison of Learning Theme-Type Means by Gender

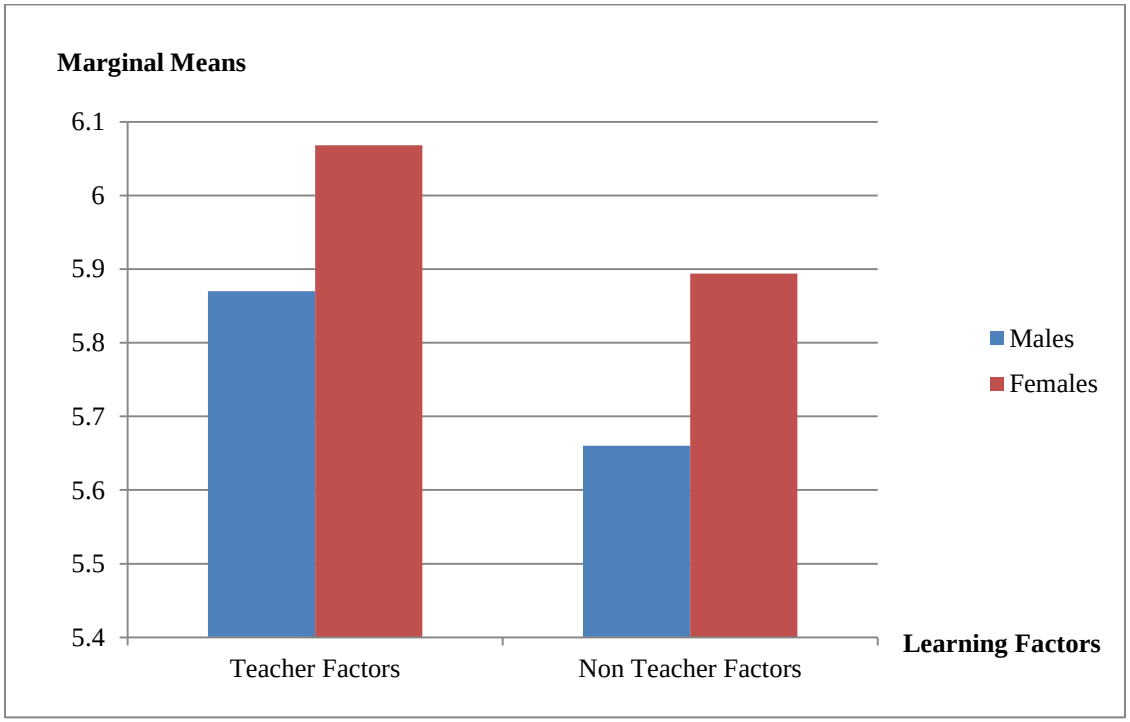


Figure 11 shows the between-subjects main effect for gender across the two types of learning theme.

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Figure 12. Comparison of Learning Theme-Type Means by University

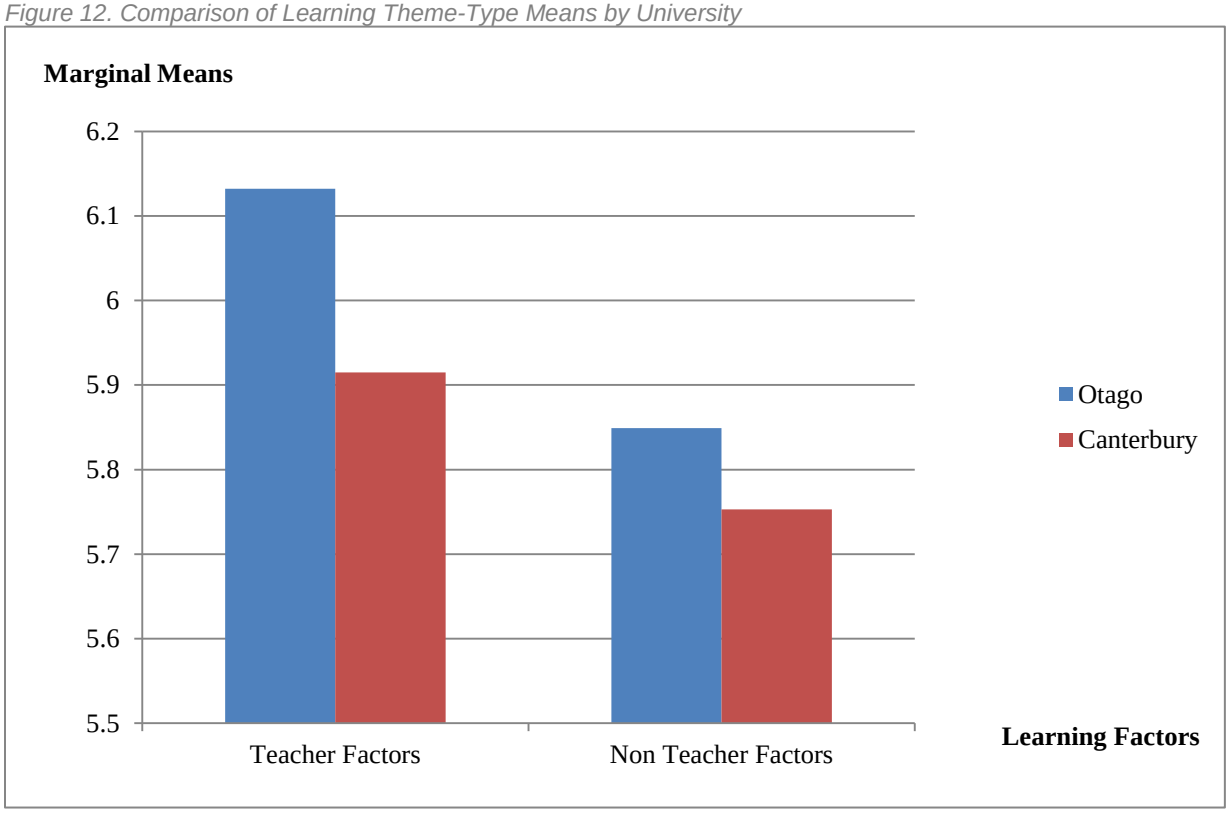

Figure 12 shows the between-subjects main effect for university across the two types of learning themes.

. *Figure 13. Comparison of Learning Theme-Type Means by Major*

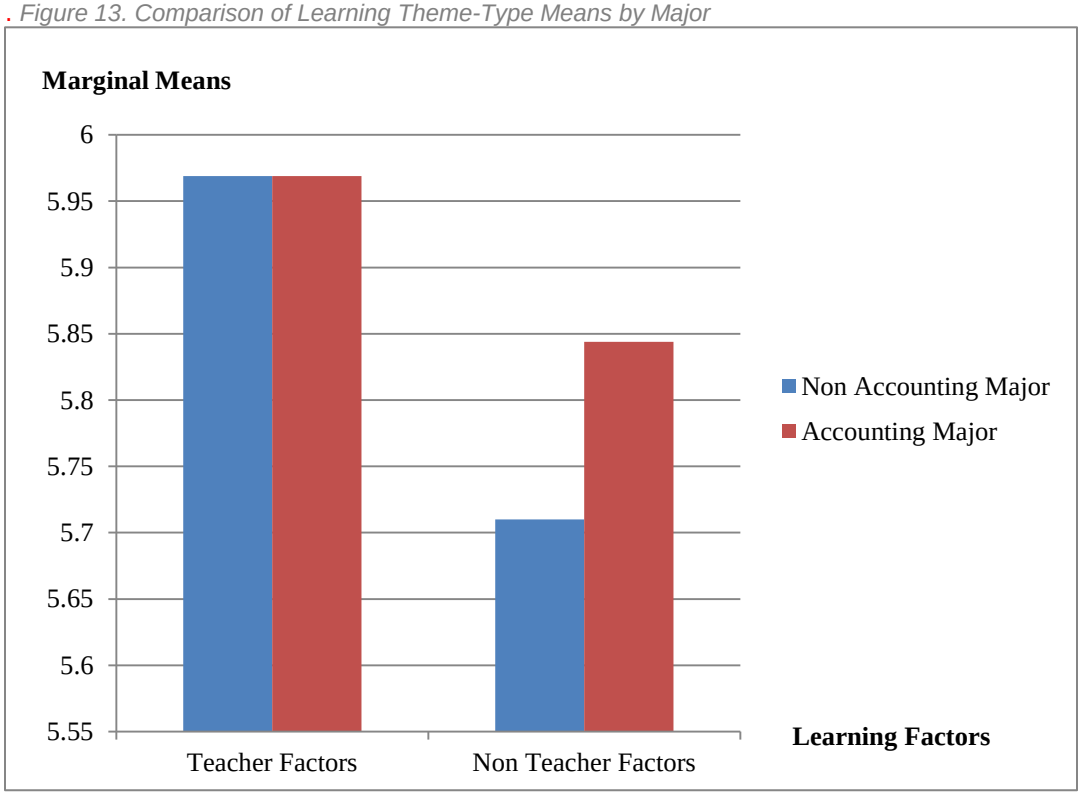

Figure 13 shows the between-subjects main effect for majors across the two types of learning themes.

In the first mixed-design ANOVA, all nine themes are used as the within-subjects variables and gender and major are used as the between-subjects variables. A significant within-subjects difference is observed across the nine themes ($p<.001$). There is also a within-subjects interaction effect for major and learning themes ($p<.01$). The between-subjects effect shows gender to be significant at $p<.01$ and major to be significant at $p<.1$ (see Table 8). The main effects for gender and major are shown graphically in Figure 14 and Figure 15. As these figures reveal, female Otago accounting students rate every theme higher than their male counterparts, while accounting majors rate all but two themes higher than non-accounting students.

Table 8. SPSS ANOVA Output for Nine-Themes Model at Otago

Source	***Type III Sum of Squares***	***df***	***Mean Square***	***F***	***Sig.***
Intercept	71986.821	1	71986.821	22425.109	.000
Gender	36.509	1	36.509	11.373	.001
Major1	12.483	1	12.483	3.889	.050
Gender * Major1	2.083	1	2.083	.649	.421
Error	930.929	290	3.210		

Table 8 shows the between-subjects SPSS ANOVA output for Otago. The nine learning themes are used as the repeated measure, and gender and major are used as the between-subjects factors.

In the second mixed-design ANOVA, the two themes (teacher-based and non-teacher) are used as the within-subjects variables and gender and major are used as the between-subjects variables. A significant difference is observed in how students rate the two themes, with the teacher-based one being rated significantly higher than the non-teacher theme ($p<.001$). No significant within-subjects interaction effects exist. The between-subjects analysis shows a significant gender ($p<.05$) and major ($p<.1$) main effect, as shown in Table 9. Female Otago students rate each of the two learning themes significantly higher than male Otago students. Likewise, Otago accounting majors rate each of the two themes higher than Otago non-accounting students, as shown graphically in Figure 16 and Figure 17 respectively.

Figure 14. Comparison of Learning Theme Means by Gender at Otago

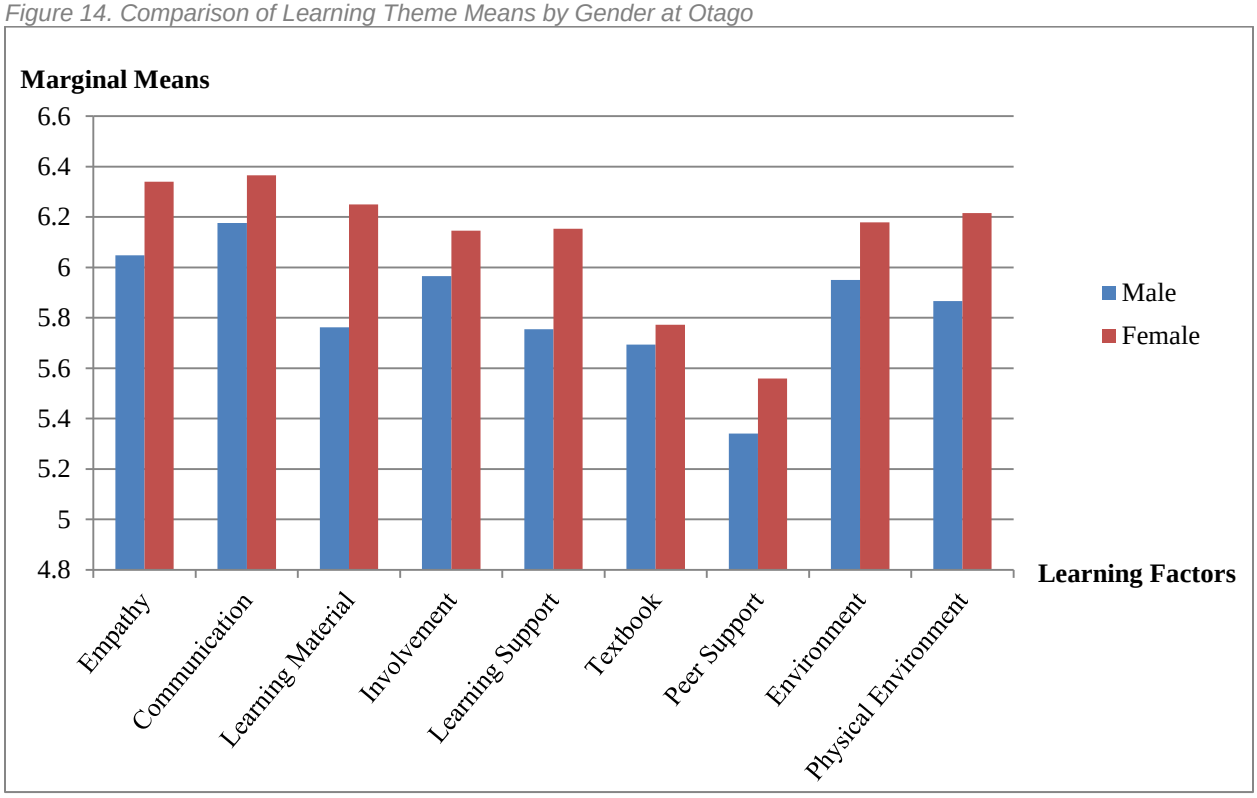

Figure 14 shows the between-subjects main effect for gender across the nine learning themes at Otago.

Figure 15. Comparison of Learning Theme Means by Major at Otago

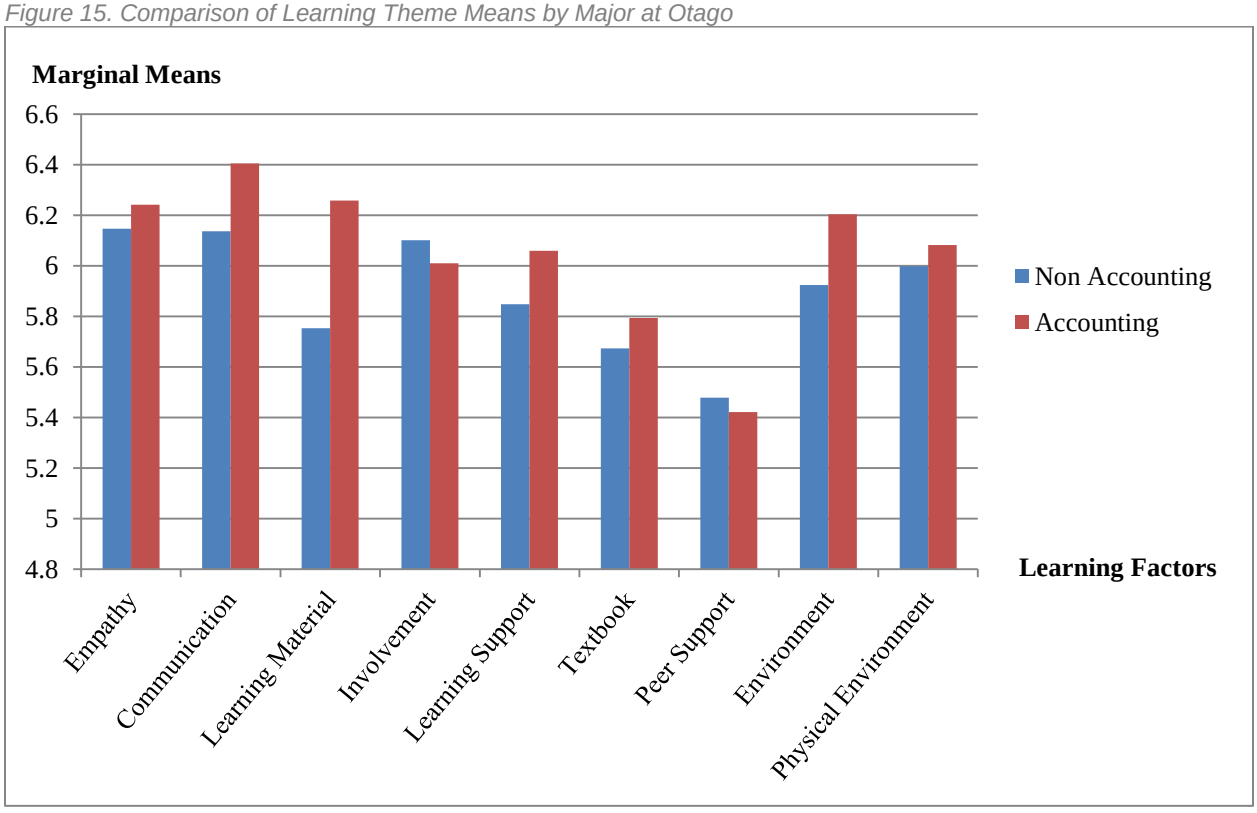

Figure 15 shows the between-subjects main effect for major across the nine learning themes at Otago.

Table 9. SPSS ANOVA Output for Two Theme-Type Model at Otago

Source	Type III Sum of Squares	Df	Mean Square	F	Sig.
Intercept	15915.644	1	15915.644	22218.081	.000
Gender	7.810	1	7.810	10.903	.001
Major1	2.600	1	2.600	3.629	.058
Gender * Major1	.502	1	.502	.700	.403
Error	207.738	290	.716		

Table 9 shows the between-subjects SPSS ANOVA output for Otago. The two types of learning themes are used as the repeated measure and gender and major are used as the between-subjects factors.

Figure 16. Comparison of Learning Theme-Type Means by Gender at Otago

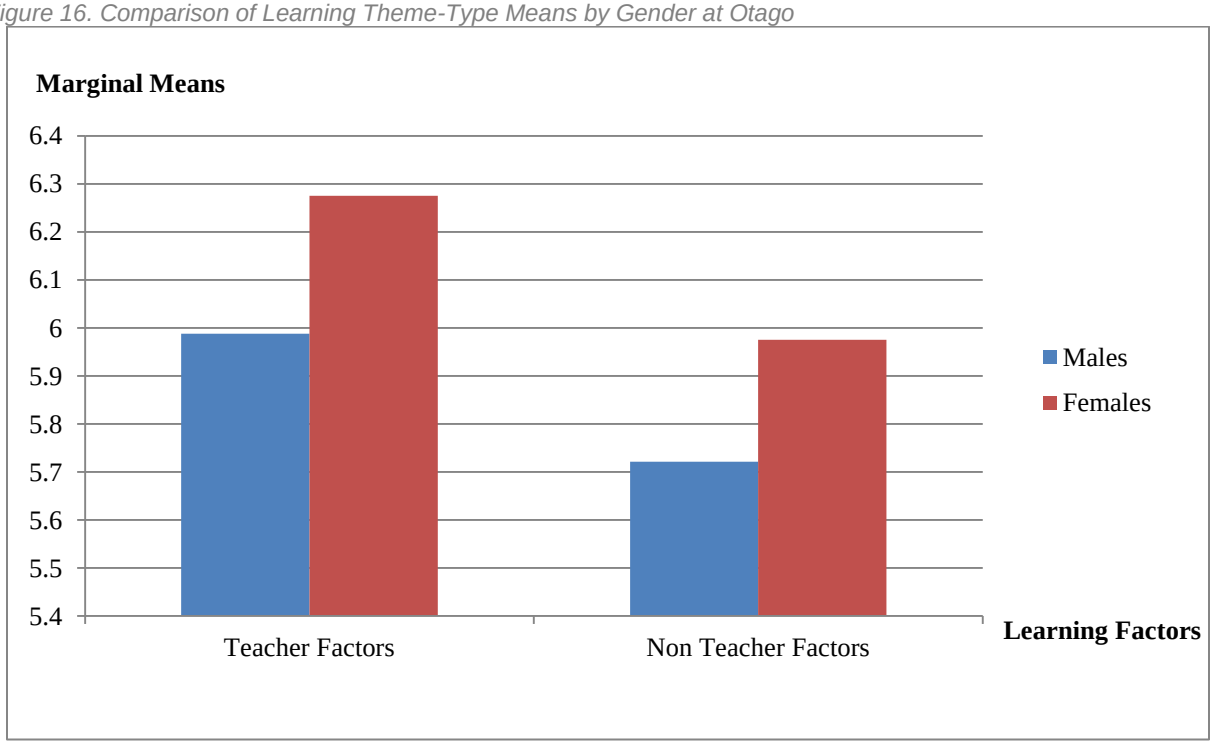

Figure 16 shows the between-subjects main effect at Otago for gender across the two types of learning theme.

Figure 17. Comparison of Learning Theme-Type Means by Major at Otago

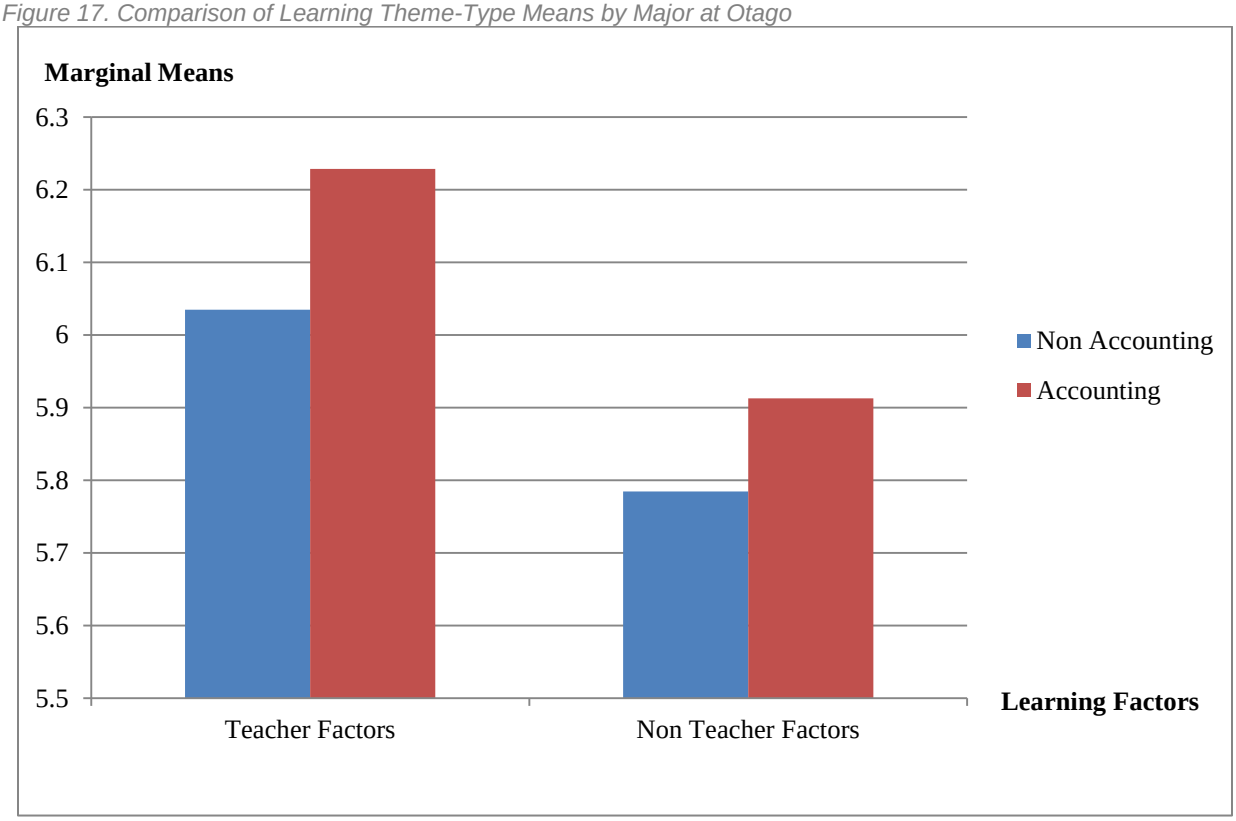

Figure 17 shows the between-subjects main effect at Otago for major across the two types of learning theme.

Learning Styles

As related above, personality, cognitive style, intellectual abilities, and knowledge and conceptions are a person's characteristics that particularly influence the learning style they prefer as students. And just as these characteristics vary from person to person, and in relation to the same person over time or in different contexts, so people learn in different ways, giving rise to the recognition that there are many styles of learning (Tan & Laswad, 2008, 2015). According to Memmott and Brennan (1998), the learning style of a student is an array of his or her preferences for perceiving, processing, storing, retrieving, and associating new information with the existing information the student has acquired previously, through learning, experience, etc. The student's learning style determines how new information about concepts and their applications, and other matters of content are learnt. Classes of students will vary in learning styles.

The significance of learning styles to academics is that in dealing with individual students and with entire classes, they will be confronted by different challenges, assuming of course that they care about responding to students' learning styles or, going further, feel the need to develop their students into more balanced learners (Adler, Whiting and Wynn-Williams, 2004). A further point may be that students in a class learn more easily and effectively when the style used to teach coincides with their learning style, compared with when it does not (Hativa & Birenbaum, 2000), although there are views to the contrary (see Vaughn & Baker, 2001).

Students on a course often have a mixture of learning styles, derived from a combination of what they are accustomed to, which will often be a limited subset of the styles that are available, and what they have come to prefer. This has direct consequences for student learning effectiveness. Adler et al. (2000) found that passive and didactic learning-style preferences of students were contributing significantly to the lack of student readiness that was impeding the spread of learner-centred approaches in accounting

education in New Zealand. Although student styles can change through experience (Marriott, 2002), as Adler et al. (2004) show, change is a function of not only what learning approach is being employed, but also how the approach is being used. In particular, Adler et al. (2004) observed that student-led case studies promoted greater change in learning style than teacher-led case studies.

As related in S2.5, we included 40 learning styles items in one of our questionnaires and these items were drawn from Honey and Mumford (1992). We should point out that the model developed by Honey and Mumford (1992) is one of many (see Cassidy, 2004), and a commonly applied alternative is that developed by Kolb (1984)—for expositions of the latter's experiential learning model, and its application among accounting students in New Zealand, see Adler et al. (2004) and Tan and Laswad (2015). These models are based on longstanding theories of learning generally, including among young children and school-age children, and on theories of adult learning (for reviews see Fincher, 1998; Kolb, 1998; McKeachie et al., 1998; Merriam & Caffarella, 1998). Many of these theories deal with how students learn, including humanistic theories (learning is something students do by/for themselves), behavioural theories (learning designs by teachers are based on stimuli, motivation, psychology of students, involving procedures/programmes) and cognitive theories, such as the pitcher theory and banking of knowledge theory referred to earlier. In addition, how people see their future is directly connected with their academic performance (Fuhrmann & Grasha[37], 1998).

The notion of learning styles as applied by Honey and Mumford (1992) classifies learners as pragmatists, activists, reflectors or theorists, as set out, defined and exemplified in terms of preferred activities in Table 10. Furthermore, Honey and Mumford were concerned to develop the learners so classified, by making them self-aware of their style and taking steps to develop their style, and so giving rise to the notion that styles are part of a cycle of development, as depicted in Figure 19.[38]

Table 10. Summary of the Characteristics of the Four Learning Styles

Learning style	***Student Preferences***	***Preferred Activities***
Activist	Activists are those students who learn by doing. Activists need to get their hands dirty, to dive in with both feet first. Have an open-minded approach to learning, involving themselves fully and without bias in new experiences.	• brainstorming • problem solving • group discussion • puzzles • competitions • role-play
Theorist	These students like to understand the theory behind the actions. They need models, concepts and facts in order to engage in the learning process. Prefer to analyse and synthesise, drawing new information into a systematic and logical 'theory'.	• models • statistics • stories • quotes • background information • applying theories
Pragmatist	These students need to be able to see how to put the learning into practice in the real world. Abstract concepts and games are of limited use unless they can see a way to put the ideas into action in their lives. Experimenters, trying out new ideas, theories and techniques to see if they work.	• time to think about how to apply learning in reality • problem solving • discussion • case studies
Reflector	These students learn by observing and thinking about what happened. They may avoid leaping in and prefer to watch from the sidelines. Prefer to stand back and view experiences from a number of different perspectives, collecting data and taking the time to work towards an appropriate conclusion.	• paired discussions • self-analysis questionnaires • personality • observing activities • feedback from others • coaching

[37] Grasha is another to have developed a learning style model, as applied to accounting students by Arquero, Fernández-Polvillo, Hassall and Joyce (2015).

[38] We appreciate the doubts raised by Duff and Duffy (2002) over the validity of Honey and Mumford's Learning Style Questionnaire.

		questionnaires	• interviews • time out

Table 10 is reproduced from *Honey and Mumford*, University of Leicester (2016) http://www2.le.ac.uk/departments/gradschool/training/eresources/teaching/theories/honey-mumford

Out of the 548 respondents to our surveys, 272 (virtually 50%) answered the questionnaire that included the learning styles items. The students were fairly evenly dispersed across all four learning styles, although there were more reflectors and theorists than there were activists and pragmatists, as Row 2 of Table 11 shows. The association between the nine learning satisfaction themes listed in Table 4 and student learning styles listed in Table 10 was investigated. In Table 11, we separate the respondents into learning styles and show for each group the proportion who rated each learning theme as important or very important.

Figure 19. Learning Styles Questionnaire Preferences within each Stage of the Learning Cycle

Figure 19 is reproduced from "Honey and Mumford: Learning Style Questionnaire," available on Talentlens, 2016, https://www.talentlens.co.uk/develop/peter-honey-learning-style-series

A decade or so ago, Adler et al. (2004) found that the vast majority (≈80%) of the New Zealand accounting students they surveyed were either convergers or assimilators. If the equivalences shown in Figure 2 are accurate, it would appear that either our respondents are out of line, or there has been a shift towards divergers/reflectors and accommodators/activists such that the concrete experience learners are now much more in balance with the abstract learners, and more reflective observation learning is now occurring than active experimentation learning. However, in their study of accounting students at another university in New Zealand, Tan and Laswad (2015) report assimilators made up 38% of the respondents (compared with our 27%), followed by convergers (23%) (compared with our 22%), accommodators (20%) (compared with our 22%) and divergers (19%) (compared with our 29%). As noted by Adler et al., learning styles of students do change but not necessarily in the direction an educator might hope or want. Our data indicate that learning styles of student generations also change.

Table 11. Rankings of Learning Themes according to Students' Learning Styles

Rank by Overall Survey Mean	***Learning theme***		***Activist***	***Reflector***	***Theorist***	***Pragmatist***
			157 (58%)	136 (39%)	103 (49%)	133 (38%)
			%	***%***	***%***	***%***
1	D	Teacher communication	90	90	90	89
2	E	Teacher empathy	89	90	90	89
3	G	Teacher learning support	72	73	73	72
4	C	Physical learning space	91	91	91	90
5	A	General environment	82	83	84	83
6	H	Teacher-provided learning material	79	76	76	76
7	F	Teacher involvement	65	65	64	64
8	I	Textbook support	81	82	81	81
9	B	Peer support	86	85	85	85

Note: The student numbers and percentages sum to greater than the total sample size and 100% because some students exhibit more than one predominant learning style.

Spearman's rank correlations for each pairing are provided in Table 12. As there are a large number of tests involved, we have increased the threshold for significance by lowering the p-value to <.01. Although the correlations indicate higher activists' learning effectiveness is positively associated with a stronger need for peer support, and reflector satisfaction is more positively correlated with higher rated general learning environments, the correlations are weak, indicating small effect sizes.

Table 12. Spearman's Rank Correlations between Learning Themes and Student Learning Style

Rank by Overall Survey Mean	***Learning Theme***		***Activist***	***Reflector***	***Theorist***	***Pragmatist***
1	D	Teacher communication	0.034	0.091	0.045	0.039
2	E	Teacher empathy	0.069	0.030	0.008	0.004
3	G	Teacher learning support	0.061	0.116	0.147[b]	0.146[b]
4	C	Physical learning space	0.164[a]	0.146[b]	0.001	0.078
5	A	General environment	-0.030	0.184[a]	0.080	0.083
6	H	Teacher-provided learning material	0.018	0.052	0.030	0.007
7	F	Teacher involvement	0.170[a]	0.084	0.064	-0.029
8	I	Textbook support	0.145[b]	0.217[b]	0.138[b]	0.113
9	B	Peer support	0.212[a]	0.170[a]	0.060	0.060

[a]Correlation is significant at the 0.01 level l (two-tailed). [b]Correlation is significant at the 0.05 level (two tailed).

Attempts to combine Kolb's work[39] with Honey and Mumford's in relation to accounting students are McChlery and Visser (2009), and Polat, Peker, Özpeynirci and Duman (2015). The combined model is shown in Figure 20.

39 Kolb's model distinguishes four learning styles: concrete experience, reflective observation, abstract conceptualization and active experimentation. These are depicted in Figure 18.

Figure 18. The experiential learning cycle and basic learning styles

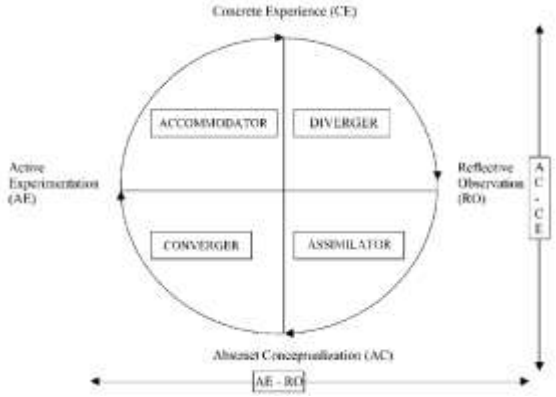

Figure 18 is reproduced from "Student-led and teacher-led case presentations: Empirical evidence about learning styles in an accounting course," by R. W. Adler, R. H. Whiting and K. Wynn-Williams, 2004, *Accounting Education: An International Journal*, 13, p. 215. Copyright 2000 by Taylor & Francis.

Figure 20. Learning Style Model of Kolb and Honey and Mumford

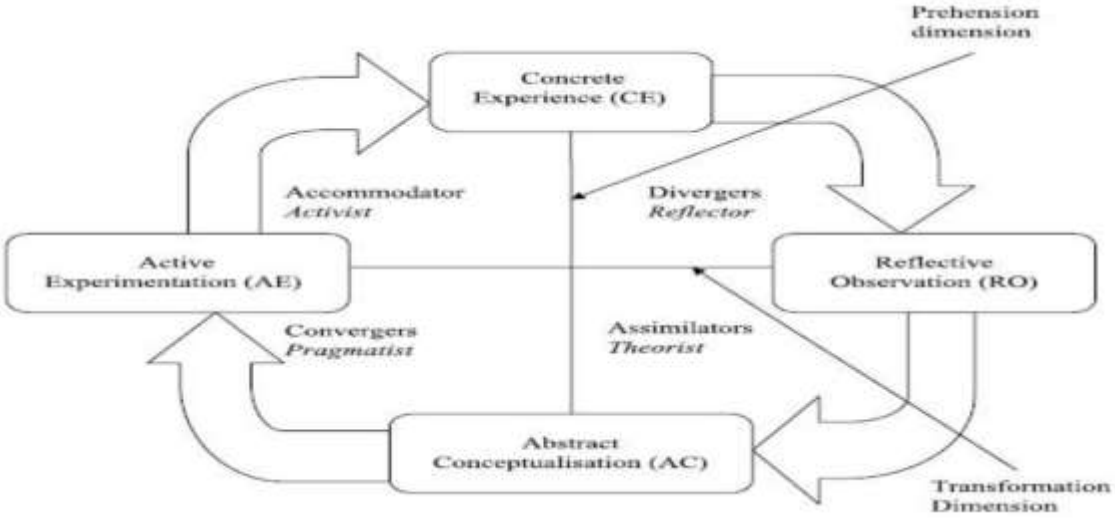

Figure 20 is reproduced from "A comparative analysis of the learning styles of accounting students in the United Kingdom and South Africa," by S. McChlery and S. Visser, 2009, *Research in Post-Compulsory Education*, *14*, p. 303.

Arquero et al. (2015)highlight the significance of learning styles in accounting. They note how accounting courses and degree programmes attract certain types of students. They cite evidence of people being attracted towards or repelled away from vocations and professions that they perceive in one way but which are the converse, and so the people attracted turn out to be ill-suited, unless they change, and the people repelled are those actually needed but they are mostly lost, or they have to be re-trained from the choices made earlier. They see accounting as being chosen as a career because it is perceived by many as being technical, mathematical and tedious, rather than people-oriented and involving communication, collaboration and other social skills and attributes (see also Bui& Porter, 2010; Wells, 2015). Arquero et al. go on to argue that some responsibility for changing this perception lies with accounting lecturers, including by better explaining the tasks a professional accountant must perform and the skills required for a successful career. This these lecturers should do not only in their classes but also in their other roles, including as recruiters of university students, careers advisors, parental and school liaison officers, programme designers (and so including internships and similar in programmes) and members of the professional bodies. Another thing that lecturers should do, this time in their roles of assessors, is to consider how their assessment strategies are going to give preference to or expel students (see Tan& Laswad, 2015), and whether the preference or expulsion is in line with or contrary to the needs of the profession and society for people suited to accounting work.

Bui and Porter (2010) suggest another possible reason for accounting and finance student dissatisfaction with their learning. They observed a misalignment between graduate skills and the knowledge expected by the accounting profession. Bui and Porter (2010) studied teaching, student performance and employers' perception of students' competencies. They found deficiencies in all of these. Among other things, courses were described as boring, lecturers were accused of poor teaching skills, many lectures were deficient as a means of learning and some courses lacked skills expected by employers of accounting graduates. They identified a considerable gap between accounting study and real world practice, and this affects student satisfaction with learning. A misalignment between student graduate skills and employer skill expectation has meant differing levels of satisfaction for students around their learning experience. Kavanagh and Drennan (2008) have noted a gap between the skills possessed by graduates and employer expectations regarding oral communication skills, ethical awareness, professional skills, teamwork, and written communication.

Learning Approaches

The branch of educational research commonly referred to as 'approaches to learning' stems from qualitative work with students to hear their voices and understand their perspectives, among other things, in order to obtain their conceptions (and perceptions) of learning and their learning environment. This work has led to a growing awareness of learning as relational, complex and contingent. As related above, personality motivation and work and study habits are a person's characteristics that particularly influence the approach they take as students to learning. And just as these characteristics vary from person to person, and in relation to the same person over time or in different contexts, so people approach differently the process of acquiring and integrating the varying forms of knowledge, skill, and understanding involved in learning so that they can use or apply it later in other contexts and circumstances. Thus, there are many approaches to learning, including in accounting and among accounting students. By better understanding these, accounting teachers will be more able in encouraging students to adopt positive attitudes to learning, and so support students in more effective and more enjoyable learning (Duff and McKinstry, 2007; Leveson, 2004).

Student approaches to learning are affected by teaching and assessment methods (Beckwith, 1991). In most universities, teacher-centred styles of instruction tend to dominate teaching (Phillips, 2005). These are separately referred to as the lecture and tutorial method. Teaching styles are assertive, but can be suggestive (Leung, Lue & Lee, 2003). Under a teacher-centred approach, the teacher tells the students propositional and procedural knowledge (i.e. provides facts and concepts, shows how to solve problems and answer questions, and offers opinions, sets questions that the students should answer, summarises student discussions and points out student mistakes).

The notion of learning approaches as applied by Biggs et al. (2001) in their Revised Study Process Questionnaire classifies learners as having or adopting surface and deep motives and strategies to learning in their current teaching context. Thus, the authors argue that it is an instrument to evaluate teaching rather than one that characterises students. However, we have tended to use the data from our survey to classify as "surface learners" or "deep learners" and thence examine the association between these learning approaches and the nine student satisfaction and learning effectiveness themes.
As related in S2.5, we included 20 learning approaches items in one of the questionnaires and these items were drawn from Biggs et al. (2001). Out of the 548 respondents to our surveys, 276 (virtually 50%) answered the questionnaire that included the learning approaches items.

Table 13 provides a summary of the proportion of students rating each of the nine learning themes as a 6 or 7 for each learning approach. As this table reveals, each of the nine learning themes is important to students with various learning approaches. In general, however, learning materials, textbook support, and peer support are rated less highly than the other six themes. It is also seen that deep learners value teacher empathy more than surface learners. Communication is important to both learning approaches. Teacher involvement is important to both learning approaches and is slightly more important to motivated rather than strategic learning approaches. Deep learners value learning support and textbook support more than their surface counterparts. The learning environment also contributes more to deep learner's satisfaction and effectiveness, and students exhibiting both types of learning approaches appreciate better quality physical learning environments.

Table 13. Rankings of Learning Themes according to Students' Learning Approaches

Rank by Overall Survey Mean	Learning theme		Deep	Surface	Deep Motive	Deep Strategy	Surface Motive	Surface Strategy
			151	125	93	58	41	84
			%	%	%	%	%	%
1	D	Teacher communication	89	88	89	90	88	88
2	E	Teacher empathy	93	86	92	93	90	85
3	G	Teacher learning support	86	77	84	90	80	75
4	C	Physical learning space	86	84	86	86	80	86
5	A	General environment	85	76	86	84	73	77
6	H	Teacher-provided learning material	70	75	73	65	78	74
7	F	Teacher involvement	91	90	94	86	93	88
8	I	Textbook support	78	74	75	83	68	77
9	B	Peer support	68	56	70	64	44	62

In an attempt to gain a further understanding about the connection between student learning approaches and the nine student satisfaction and learning effectiveness themes, Table 14 provides Spearman's rank correlations between learning approaches and each of the nine themes. Due to the large number of correlation tests being conducted, only the correlations significant at p<.01 are highlighted.

Table 14. Spearman Rank Correlations between Learning Themes and Learning Approaches

Rank by Overall Survey Mean	Learning Theme		Deep	Surface	Deep Motive	Deep Strategy	Surface Motive	Surface Strategy
1	D	Teacher communication	0.068	0.079	0.070	0.063	0.023	0.133[b]
2	E	Teacher empathy	0.202[a]	0.016	0.208[a]	0.170[a]	-0.025	0.040
3	G	Teacher learning support	0.148[b]	-0.083	0.145[b]	0.139[b]	-0.091	-0.073
4	C	Physical learning space	0.092	0.022	0.093	0.073	-0.005	0.042
5	A	General environment	0.230[a]	0.061	0.214[a]	0.207[a]	0.037	0.062
6	H	Teacher-provided learning material	0.150[b]	0.137[b]	0.176[a]	0.096	0.113	0.123[b]
7	F	Teacher involvement	0.112	-0.045	0.132[b]	0.084	-0.034	-0.011
8	I	Textbook support	0.105	-0.020	0.097	0.100	-0.060	0.006
9	B	Peer support	0.156[a]	-0.056	0.159[a]	0.120[b]	-0.047	-0.027

[a]Correlation is significant at the 0.01 level l (two-tailed). [b]Correlation is significant at the 0.05 level (two tailed)

In general, students with higher deep learning scores provide higher ratings for teaching empathy, peer support, and the general learning environment. Surface learners do not exhibit any significant correlations (p<.01) with any of the learning themes. It is, however, important to note that even the significant correlations associated with deep learners are low, indicating small effect sizes.

Comparison of Styles and Approaches

The relationship between learning styles and learning approaches can be seen as unproblematic. For example, Adler et al. (2004) opine that "the growing reliance that accounting students place on convergent learning styles means that they, as students, become progressively less inclined to use deep processing approaches" (p. 216). Indeed, apart from an oblique reference in S1 to the competing or conflicting notions of student learning styles and student learning approaches, we have so far treated the two as compatible parts of conventional wisdom, as their juxtaposed positions on the heuristic model of Entwistle and Tait (1990) would seem to suggest (see Figure 5). Thus, we feel before going further into comparing and contrasting the review of findings presented in S3.4.2 and S3.4.3, we should relate that the two have not only been investigated by separate camps of English-language researchers but the two camps are geographically, and so probably culturally divided, even if there is a preponderance of European indigenous ancestry (Duff & McKinstry, 2007). They are also divided methodogically: Duff and McKinstry claim that those in the *approaches* camp, based mainly in Britain, Australia and New Zealand, "are motivated to understand the interaction between learners and their environment," (p. 184), whereas those in the *styles* camp, based mainly in North America, seek to establish learners' preferences for "particular ways (styles) of learning" (p. 184). Furthermore, the *approaches* camp counsels lecturers "to orchestrate the learning environment and the learner's perceptions of that environment to achieve learning objectives that reflect deep, meaningful, and conceptual understanding of the subject matter" (p. 184). Camp members criticise those in the *styles* camp for being "top-down" and "acontextual".
The final analyses examine student learning styles and learning approaches and the nine student satisfaction and learning effectiveness themes while controlling for gender and major. Table 15 provide Spearman's rank correlations for each pairing.

One of the most striking aspects of Table 15, which examines female and male accounting students, is the relative preponderance of significant and positive correlations related to female students that is not matched by male students. While many of the correlations for females are approaching a reasonable effect size, with some correlations approaching 0.5, the correlations for males are all insignificant based on the revised confidence level of $p<.01$, which has been used due to the large number of statistical tests being conducted.

Table 16 provides a summary of the Spearman's rank correlations between the nine student satisfaction and learning effectiveness themes and both the learning styles and learning approaches for non-accounting males and females. Again it is the case that females exhibit a number of significant correlations, but their male counterparts generally do not. In fact, the only two significant male-related correlations are for the activist with teacher empathy and the activist with teacher communication. Interestingly, both correlations are negative, indicating that students with higher activist scores prefer teachers who are less empathetic and less able communicators. Since activists prefer to sense things and be guided by their feelings, these findings may be interesting but perhaps not all that surprising.

Table 15. Correlations for Male and Female Accounting Majors across Learning Themes, Learning Styles and Learning Approaches

Rank by Overall Survey Mean	Panel A: Female Accounting Majors											
	Learning theme		Deep	Surface	Deep Motive	Deep Strategy	Surface Motive	Surface Strategy	Activist	Reflector	Theorist	Pragmatist
1	D	Teacher communication	0.139	0.320[b]	0.156	0.132	0.208	0.370[a]	0.183	0.007	-0.138	0.136
2	E	Teacher empathy	0.214	0.192	0.186	0.231	0.116	0.242	0.236	0.137	-0.085	0.016
3	G	Teacher learning support	0.184	0.021	0.120	0.217	-0.001	0.057	0.180	0.236	-0.076	0.183
4	C	Physical learning space	0.229	0.245	0.188	0.256	0.178	0.273[b]	0.219	0.219	-0.013	0.284[b]
5	A	General environment	0.190	0.307[b]	0.173	0.191	0.213	0.359[a]	0.096	0.311[a]	-0.023	0.204
6	H	Teacher-provided learning material	0.105	0.495[a]	0.088	0.139	0.447[a]	0.438[a]	0.143	0.135	-0.036	0.097
7	F	Teacher involvement	0.232	-0.068	0.129	0.317[b]	-0.061	-0.030	0.204	0.107	-0.058	0.030
8	I	Textbook support	0.326[a]	-0.162	0.313[b]	0.352[a]	-0.150	-0.141	0.295[b]	0.215	-0.078	0.076
9	B	Peer support	0.455[a]	-0.025	0.455[a]	0.406[a]	-0.043	0.018	0.329[a]	0.274[b]	0.178	0.046
	Panel B: Male Accounting Majors											
1	D	Teacher communication	-0.045	0.265[b]	-0.020	0.039	0.161	0.246	0.102	0.201	0.291[b]	0.105
2	E	Teacher empathy	0.307[b]	0.297[b]	0.334[b]	0.295[b]	0.259	0.210	0.144	-0.115	0.209	-0.032
3	G	Teacher learning support	0.055	0.094	0.063	0.067	0.040	0.102	0.141	-0.038	0.165	-0.020
4	C	Physical learning space	-0.105	0.134	-0.155	-0.002	0.205	0.108	0.275[b]	-0.050	-0.023	-0.074
5	A	General environment	0.099	0.211	0.143	0.060	0.270	0.154	0.154	0.013	0.016	-0.030
6	H	Teacher-provided	0.168	0.242	0.266[b]	0.044	0.322[b]	0.137	0.103	-0.192	0.004	-0.098

		learning material										
7	F	Teacher involvement	0.023	0.086	0.042	-0.010	0.147	-0.029	0.131	0.012	0.006	-0.123
8	I	Textbook support	0.166	0.274[b]	0.242	0.043	0.212	0.271[b]	0.355[a]	0.203	0.214	0.156
9	B	Peer support	0.177	-0.004	0.209	0.091	0.075	-0.041	0.251	0.232	0.310[b]	0.284

[a]Correlation is significant at the 0.01 level l (two-tailed). [b]Correlation is significant at the 0.05 level (two tailed).

Table 16. Correlations for Male and Female Non-Accounting Majors across the Learning Themes, Learning Styles and Learning Approaches

Rank by Overall Survey Mean	***Panel A: Female Non-Accounting Majors***											
	Learning Theme		***Deep***	***Surface***	***Deep Motive***	***Deep Strategy***	***Surface Motive***	***Surface Strategy***	***Activist***	***Reflector***	***Theorist***	***Pragmatist***
1	D	Teacher communication	0.130	0.050	0.147	0.096	0.054	0.144	0.040	0.209	0.161	0.280[b]
2	E	Teacher empathy	0.169	-0.089	0.187	0.109	-0.190	-0.017	0.218	0.133	-0.033	0.117
3	G	Teacher learning support	0.077	-0.256	0.089	0.057	-0.237[b]	-0.225[b]	0.071	0.127	0.173	0.258[b]
4	C	Physical learning space	0.060	-0.104	0.059	0.058	-0.219[b]	0.056	0.065	0.216	0.053	0.113
5	A	General environment	0.397[a]	-0.136	0.310[a]	0.426[a]	-0.191	-0.070	-0.312[a]	0.345[a]	0.215	0.192
6	H	Teacher-provided learning material	0.138	-0.072	0.168	0.074	-0.080	-0.024	-0.018	0.178	0.150	0.184
7	F	Teacher involvement	0.201	-0.136	0.211[b]	0.194	-0.137	0.004	0.227	0.183	0.176	0.066
8	I	Textbook support	0.044	-0.016	0.035	0.067	-0.117	-0.011	0.023	0.433[a]	0.256[b]	0.114
9	B	Peer support	0.081	-0.093	0.060	0.115	-0.146	0.021	0.099	0.139	0.014	0.006
	Panel B: Male Non-Accounting Majors											
1	D	Teacher communication	-0.097	-0.068	-0.097	-0.060	-0.131	0.018	-0.165	-0.051	-0.041	-0.219
2	E	Teacher	0.101	-0.099	0.096	0.128	-0.112	-0.018	-0.292[b]	-0.022	0.010	-0.065

		empathy									
3	G	Teacher learning support	0.040	-0.094	0.069	0.039	-0.178	0.056	-0.053	0.083	0.236[b]	0.087
4	C	Physical learning space	-0.118	0.179	-0.061	-0.115	0.170	0.176	0.196	0.181	0.043	0.093
5	A	General environment	0.014	0.086	0.033	0.042	0.024	0.136	-0.016	0.076	0.079	-0.019
6	H	Teacher-provided learning material	0.078	-0.038	0.177	-0.032	-0.034	0.031	-0.092	-0.005	0.016	-0.118
7	F	Teacher involvement	0.023	-0.033	0.059	-0.023	-0.021	0.049	0.104	0.057	0.105	-0.039
8	I	Textbook support	-0.097	-0.050	-0.158	-0.008	-0.119	0.037	0.074	0.023	0.111	0.093
9	B	Peer support	-0.016	-0.005	-0.022	-0.003	-0.078	0.076	0.179	0.110	0.001	0.058

[a]Correlation is significant at the 0.01 level l (two-tailed). [b]Correlation is significant at the 0.05 level (two tailed).

Educator Characteristics and Perspectives

Educator characteristics and perspectives comprise the set of skills, traits, and attitudes that affect lecturing effectiveness and student learning. Educator characteristics and perspectives are a major factor to the learning situation in the sense of the nature and quality of teaching (or learning facilitation) received or experienced by students (Fincher, 1998).

Regarding the disciplinary differences among educators signalled in S3.2, the people labelled educators or teachers in some disciplines may not see themselves as such; they may also have definite, disciplinary-specific views about types of classes they must stage and types of teaching methods they must use in those classes, including how narrow or wide-ranging the methods should or can be.

Survey opinions of award-winning teachers that look at what behaviours to avoid in the classroom show that educator personality and empathy shown to the student were critical. Stout and Wygal (2010) identify the following behaviours of teachers adversely affect student satisfaction with their learning experience: negative or uncaring attitudes about students and the class, improper preparation and organisation, faulty or deficient course-delivery skills, assessment mistakes and an inflexible or inaccessible demeanour. Educator characteristics and perspectives and the learning environment are also highlighted in work by Long, Ibrahim and Kowang (2014). Their main findings show that the impact of lecturers' competencies on student satisfaction are interaction with students, knowledge of subject, punctuality, teaching creativity, learning outcome, assignment, examination, and clarity of presentation. Educator respect and attitude towards students is also a theme in work by Handal et al. (2011). Consideration of student learnings styles, rapport, knowing student names, personalised feedback as well as concerns about assessment, class participation and flexibility in tutorials all impact student satisfaction with the learning environment. An ability to communicate clearly is another valued educator characteristic (Mowbray, 2010). These studies suggest that educator characteristics and perspectives feed back to the learning environment and student satisfaction with that same learning environment.

Lecturing effectiveness is also very dependent on the framework within which the learning is developed. Fox (1994) finds that lecture effectiveness is associated with an explanation of course aims and objectives, the placement of course material within the content of the degree programme, course structure description, assessment explanation, choice and use of teaching aids, clarity of delivery, adjustment of pace to class needs, encouragement of questions in class, support material recommendations, creating an interest in the course, and assignment feedback.

The more that learning objectives are clearly expressed as subject-specific, personal transferable, and academic outcomes, the more the learner is able to concentrate on what he or she needs to know in order to succeed on a given module or course (Allan, 1996). Students so informed should be able to take greater charge and be more responsible for their learning, and so develop as independent and lifelong learners who are able to adapt and learn for themselves in a rapidly changing social and economic environment. In addition to students, other interested parties, such as other teachers, employers or professional bodies, would have a more transparent idea of what the course is about and what study demands and achievements are aspired to if teachers publish the learning outcomes of courses they design and stage. Research suggests that a better understanding of the relationship between in-class work and student outcomes is necessary (Hidalgo-Cabrillana & Lopez-Mayan, 2015).

Bale and Dudney 2000 consider andragogical learning models, which rely on students being self-directed and self-motivated and preferring learning that is active, participative, problem-centred and relevant. They measure the learning preferences of undergraduates straight from school and recommend a "hybrid" teaching model that incorporates both pedagogical and andragogical elements, and recommend teaching strategies compatible with these elements.

In contrast to teacher-centred approaches to learning, student-centred approaches promote student discussion around issues by encouraging students to express their feelings and points of view, challenging them to explore problems and develop their opinions, and helping them become confident decision makers. The student-centred teacher helps his or her students to realise the strengths and weaknesses of their argumentation and assists with their reflection on their learning. To support this

learning approach, the educator adopts styles that are predominantly collaborative and facilitative (Bibace, Catlin, Quirk, Beattie & Slabaugh, 1981; Leung et al., 2003). Educator characteristics still include on-stage roles of information provider and role model, but the educator adopts a role of facilitator and moderator (including observing, listening to and encouraging the students, as well as formatively assessing them). More effort goes into the role of teacher assessor, teacher planner and teacher resource developer of individual and group learning prior to students commencing their course learning (Harden & Crosby, 2000). (ÅKerlind, 2003; Chung & Chow, 2004; Kember, 2009; Lea et al., 2003; Miall, 1989)

Arguments advanced for greater adoption of learner-centred approaches include that they can generate better results in terms of deeper, more effective learning and greater learner motivation by enabling students to increase their independent learning abilities and engage in lifelong learning of their own accord (e.g., Adler & Milne, 1995, 1997; Bowden & Marton, 1998; Leung et al., 2003; Lord & Robertson, 2006). However, corresponding with their choices of teaching approaches, teacher planners often have expectations of the particular learning styles that their students should adopt. This coincides with the notion of clustering of teaching and learning styles, as discussed by Harden and Crosby (2000) and which is summarised in Table 17.

Table 17. Teaching and Learning Style "Clusters"

Primary Teaching Style	***Primary Learning Style***	***Preferred Teaching Methods***
Expert, Formal Authority	Dependent, Participant, Competitive	Didactic lectures, technology-based presentations, teacher-centred questioning and discussion
Personal Model, Expert, Formal Authority	Participant, Dependent, Collaborative	Role modelling, coaching/guiding students
Facilitator, Personal Model, Expert	Collaborative, Participant, Independent	Case-based discussions, concept mapping, critical thinking, fishbowl discussions, kineposium, guided reading, problem-based learning, role plays, student teacher of the day
Delegator, Facilitative, Expert	Independent, Collaborative, Participant	Contract teaching, class symposium, debate formats, small group discussions, independent study/research, modular instruction, panel discussions, learning pairs, student journals

Table 17 is reproduced from "Teaching in the medical setting: Balancing teaching styles, learning styles and teaching methods" by L. Vaughn and R. Baker (2001). Medical Teacher, 23(6), Table 3 in website supplement. Copyright 1996 by Alliance Publishers, Pittsburgh, PA.

An educator's ability to reflect and innovate his or her approach to lecturing also affects teaching effectiveness and student satisfaction with the learning experience. Jaskyte, Taylor and Smariga (2009) investigate factors associated with innovative teaching. They report that educators can promote teaching effectiveness by the following means:

- adopting a leadership approach to learning (i.e. show confidence, adjust to different student learning styles, encourage student engagement, use a variety of teaching methods, brings originality to the learning environment)
- demonstrating a genuine empathy for students (i.e. engage students and responds to their feedback, act enthusiastically, encourage thinking outside the box, allow for individual creativity, learn from students, demonstrate a good sense of humour)
- bringing a contagious learning psychology to the classroom (i.e. challenge students, introduce real world learning, take students out of their comfort zone, instil enthusiasm and curiosity into the classroom experience, bring a holistic understanding to a subject, use contemporary examples and facilitate student discovery).

The impact of research-informed teaching on student learning has also been studied. While earlier work by Ramsden and Moses (1992) finds no evidence for a simple functional association between high research output and the effectiveness of undergraduate teaching in Australian higher education, a set of more recent studies presents the opposite view. Miller, Stocks and Proctor (2010) report that research can enhance teaching effectiveness by demonstrating educator competence, authenticity and understanding of research purposes to students. Educators who instil students with a positive

perception of research improve learning effectiveness by being more enthusiastic, credible and current (Miller et al., 2010). It is most telling, however, that Miller et al. go on to report that the most important educator characteristics associated with student perceptions of teaching effectiveness are above average communication skills and a reputation for being fair, while the least important was conducting and publishing relevant research. Consistent with this outcome, Guney (2009) shows that student performance is positively associated with student perceptions of teaching quality. In a similar vein, Dahl and Smimou (2011) find that student perceptions of educator quality is positively correlated with undergraduate student motivation.

The pressure to keep pace with changing subject content as dictated by various professional bodies can also compromise the effectiveness of student learning. This is a corollary of the claim that "disciplinary knowledge structures shaped academics' experiences of research, teaching and learning and how such epistemological beliefs, in turn, appeared to determine the pace and trajectory of students' induction into and participation in disciplinary communities" (Robertson & Bond, 2005b, p. 218). The fields of accounting and finance are continuing to expand in subject diversity and technical complexity. Evidence from Adler et al. (2000) suggests that teachers feel obliged to cover more content, putting themselves under pressure to expand course content as the subject area grows. The trade-off between obtaining maximum topic coverage and introducing more student-led learning activities resulted in educators being unwilling to reduce course content for what they felt were more time-consuming learner-centred approaches.

According to Neumann (2001), teaching is subject to organisational influences. Accounting departments are not unusual for being expected to cover a wide range of specialisms (e.g., audit, tax, commercial law, financial accounting, management accounting) as part of profession-oriented course programmes. They need academics in several different specialisms, and probably have only one or two in each specialism; they may also have specialists in areas outside the normal professional fare (social and environmental accounting, government and public sector accounting). "Such structures and teaching demands will hence influence teaching and research patterns, programmes and styles of staff" (p. 141).

Key Points

The review of findings is based on a conceptual model to illuminate linkages between learning environment characteristics, educator characteristics and perspectives, and student characteristics and perspectives on the one hand, and student learning satisfaction and student learning effectiveness on the other. While the ultimate goal of this research is to improve the proficiency and effectiveness of accounting and finance teachers. As this literature reveals, some of the realisation of this goal is complicated by the need for orchestrating unified action by multiple parties.

The literature review further suggests that the learning landscape for accounting and finance undergraduates is changing. Blended learning that develops student engagement, together with knowledgeable, research-informed educators who have a genuine interest in their students, have become common themes in the more recent literature. If this were indeed the case then we would expect to see stronger links between our three main input factors: educator characteristics and perspectives, student characteristics and perspectives, and learning environment, and the relationship they create between student satisfaction with the learning experience, teacher effectiveness and ultimately student learning effectiveness. Our study will examine these links in more detail through a detailed qualitative analysis of a diverse population of students.

Change Possibilities, Interventions and Constraints

We have presented various information and ideas along lines of improving lecturing, teaching, learning, etc. based on principles of learning and the like. We are aware however that we are far from the first and that the degree of success achieved among our predecessors is not great. Indeed, according to Fuhrmann and Grasha (1998):

> *Regardless of their merits, the attempts at reforms based on principles of learning have been less than spectacular. To date, it is not general practice for people systematically to develop their teaching based on principles of learning. In fact, some students and faculty seem to display passivity, apathy, and even overt hostility and cynicism when*

> *suggestions are made to substitute new methodologies for the old. One issue is that the nontraditional, unconventional, alternative ideas represent attitudes that (1) put the student first and the institution second; (2) concentate more on students' needs than the institution's convenienc; (3) encourage diversity of individual opportunity rather than uniform prescription; and (4) deemphasize time, space, and course requirements in favor of competence and performance. Such beliefs run counter to many of the past experiences of students and faculty. Thus, they raise anxiety in students who want more structure or are simply afraid of deviating from they ways they learned in the past. Faculty often charge that new methods lack academic rigor or are based on ideas that are not well researched (p. 12)*

A conceptual framework is needed for understanding what and how knowledge is acquired in the accounting discipline at universities.

The primary aim of the study was to enable accounting and finance academics to improve their proficiency and effectiveness as teachers. It is one thing to want change, and for managers of academics to embark on a formal change, but it is quite another to bring about change to situated practices (Burns & Scapens, 2000). There are examples in the literature of successful attempts to do this, however, these situations typically involve a community of practice approach, in which individually and collectively, those adopting the change are not only involved in it but also are virtually at one with the change; that is, they themselves change as people. Part of this approach is to review why the participants in the community use particular methods, and indeed review their various beliefs and values why they hold or adhere to them. The approach would likely involve participating in teaching improvement interventions to support the change (e.g., workshops, consultation, sharing of articles and similar resource material, grant-aided instructional projects, sharing the change with people of similar expertise and aspirations). An example is the peer partnership program, about which Barnard, Croft, Irons, Cuffe, Bandara, and Rowntree (2011) report from Queensland, Australia. The program was designed to bring together academic staff for advancing teaching practice. It encouraged professional and supportive environments for the purpose of critical reflection and personal development (see also Boyatzis, 2006; Jones, 2010; Stoll, Bolam, McMahon, Wallace & Thomas, 2006; Weimer & Lenze, 1998).

Conclusion

This research set out to explore why accounting students, both in New Zealand and throughout the world, exhibit low levels of satisfaction with their learning. The aims of the research were to understand why such a situation was occurring and provide guidance on how improvements could be made to students' reported levels of learning satisfaction and learning effectiveness.

As is invariably true with research, the present study possesses the usual limitations attached to the collection of qualitative data from the focus sessions and the quantitative data from the surveyed students. Problems with sample representation and faithfulness of data interpretation can limit the conclusions that can be drawn from focus group data. It is worth recognising that due care was exercised when conceiving the focus groups' compositions to ensure the full representation of the entire population's views on factors associated with learning satisfaction and learning effectiveness. In addition, we used the statistical package SAS Enterprise Data Miner to analyse the qualitative data. This technique was used as a way to independently test the researchers' notetaking-based conclusions and, in the process, helped to promote more valid and complete understandings of the focus group discussions. Various controls were similarly used for the survey data collection and analysis to ensure their reliability and validity. Such steps as checking for non-response bias and employing higher confidence levels when performing large numbers of statistical tests were used to help enhance the robustness and generalisability of the survey findings.

Based on a large scale survey of 548 University of Otago and University of Canterbury undergraduate students, evidence was found to support this research's earlier focus groups' uncovering of nine themes related to student satisfaction and learning effectiveness. These nine themes are: teacher empathy, teacher communication, teaching supplied learning material, teacher involvement, teacher learning support, textbook support, peer support, physical learning space, and the general learning environment. While all nine themes were invariably rated as possessing high importance for student learning satisfaction and learning effectiveness, further analysis revealed that the teacher-based

factors (i.e., teacher empathy, teacher communication, teaching supplied learning material, teacher involvement, and teacher learning support) were more important than the non-teacher factors (i.e., , textbook support, peer support, physical learning space, and the general learning environment). Significant differences were observed between the ratings of the nine themes and a student's gender, major, and university. In particular, females, accounting majors, and Otago students rated the nine themes higher than males, non-accounting majors, and Canterbury students, respectively. Why this should be the case is worthy of additional investigation. While there is literature to support female students being on average more conscientious with their study approach than male students (Reddington et al., 2015), and perhaps this could explain the greater importance they attach to the satisfaction and learning effectiveness themes over their male classmates, there is no literature to explain why accounting majors and Otago students should rate the themes higher than their non-accounting, Canterbury counterparts.

At present, policymakers, ranging from elected politicians to academic administrators, have been making decisions based on the misguided view that comparisons can be validly made across disparate sets of students on such measures as their satisfaction with their learning. The National Student Satisfaction Survey conducted in the UK and the Australian Graduate Survey are two prime examples of where this is occurring. Clearly, based on the literature review presented in this report (see, for example, Laughlin, 2014) and the empirical findings derived from the present research, this cannot be the case. If, as this research shows, students studying different majors ascribe different levels of importance to the themes underpinning student learning satisfaction and learning effectiveness, then comparisons across classes with different majors, different mixes of males and females, and different university affiliations are not valid. Policymakers would therefore be wise to stop making such comparisons. In fact, the advice to eschew comparisons across disciplines is the exact advice given in the Code of Practice relating to the Australian Graduate Survey (Graduate Careers Australia, 2010, p. 6). While norm-based comparisons may simplify an administrator's task, especially when trying to evaluate something as complex as teaching, ease of execution should not come at the expense of valid insight. Until a sufficient body of education research can be built up to explain how different students perceive and subsequently report on their learning satisfaction and learning effectiveness, policymakers, if they are truly interested in the faithful execution of their role in promoting excellence in teaching and learning, will need to become more knowledgeable about what is being taught, how it is being taught, and to whom it is being taught.

The main student-based traits examined in the present study were student learning styles and learning approaches. In general, the correlations between the nine satisfaction and learning effectiveness themes and students' learning styles and learning approaches were found to be insignificant and/or possessing small effect sizes. However, at the subgroup level, statistically significant and moderate effect sizes were uncovered. Female students, both accounting and non-accounting, were found to have significant positive correlations between the nine themes and their learning styles and learning approaches. Meanwhile a general lack of association was observed for males. Again, these findings should be plumbed more deeply to understand how educators can best serve the learning needs of their students.

As to the question, "How can accounting and finance academics improve their lecturing?" we offer the following advice. Firstly, these academics should become aware of the fact, especially the accounting academics, that they are teaching students who exhibit the highest demands. These students have higher expectations for the teacher and non-teacher learning factors that support their learning than their peers who study other majors. Understanding this fact is paramount to realising that performing at the average educator level will produce a student satisfaction rating that is less than average.
As a second prescription for accounting and finance academics, we encourage them to use the nine themes related to student satisfaction to assess the performance derived from any given teaching innovation they may devise. As educators, we must always seek to challenge our learning and teaching practices. In the process of educators reflecting on their teaching, it is often the case that new learning and teaching innovations are devised. Yet how does an educator know which innovations to retain and which to discard? Basing the decision on a single measure of students' self-reported satisfaction may be the usual practice, but using a more multidimensional approach as displayed by this study's nine themes of student satisfaction and learning effectiveness will likely produce superior understandings of an innovation's relative benefits.

As a final piece of prescription, we wish to remind accounting and finance academics that their role as educators must be viewed as a continuous journey of self-reflective practice (Schön, 1983). While there is an increasingly prevalent managerial intrusion into and inspection of teaching practice, this form of assurance will always be inferior to an educator's reflective practice. We therefore encourage our accounting and finance colleagues to demonstrate their commitment to self-reflective practice and to defend their colleagues who are doing so from any negative aspersions made by university managers and administrators, especially when the basis for their aspersions derives from the inappropriate comparison of non-similar disciplines. This superficiality is bad practice that needs to be stamped out.

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Appendix A Copies of the Questionnaires administered to Students in Semester 2 2015

The first questionnaire (pp. 73–75) contains items associated with demographics, learning satisfaction and learning styles; the source of the 40 items in the latter is Honey and Mumford (1992). The second questionnaire (pp. 76–78) contains items associated with demographics, learning satisfaction and learning approaches; the source of the 20 items in the latter is Biggs, Kember and Leung (2001).

Student Learning Experience and Satisfaction Questionnaire (LS)

Please note that this research has University of Otago Ethics approval and that your answers will remain CONFIDENTIAL. Part A is for demographic purposes and is required for authorisation and verification. Part B of the survey relates to your satisfaction in learning. Part C relates to learning skills. Please answer all questions as honestly as possible. Thank you for your co-operation.

PART A - Demographic Information

Fill in like this →●

Student ID Code:

Enter your student ID number and fill in the corresponding dots.

ID:							
	⓪	⓪	⓪	⓪	⓪	⓪	⓪
	①	①	①	①	①	①	①
	②	②	②	②	②	②	②
	③	③	③	③	③	③	③
	④	④	④	④	④	④	④
	⑤	⑤	⑤	⑤	⑤	⑤	⑤
	⑥	⑥	⑥	⑥	⑥	⑥	⑥
	⑦	⑦	⑦	⑦	⑦	⑦	⑦
	⑧	⑧	⑧	⑧	⑧	⑧	⑧
	⑨	⑨	⑨	⑨	⑨	⑨	⑨

Gender: F ○ M ○

Age: 17 - 21 ○ 22 - 30 ○ > 30 ○

What degree are you currently enrolled in?

BCOM ○ BCOM/LLB ○ BA ○ BCOM/BA ○ BSC ○ BCOM/BS ○ OTHER ○

What is/are your intended major subject(s)?

ACCT ○ ECON ○ FINA ○ INF.SCI ○ INTL.BUS ○ MKTG ○ MGMT ○ TOURSM ○ OTHER ○

How many years (including this one) of university/polytech studies have you undertaken?

1 yr ① 2 yrs ② 3 yrs ③ 4 yrs ④ 5 yrs ⑤

What ethnic group do you identify with?

ASIAN ○ EUROPEAN ○ INDIAN ○ MAORI ○ NZ EURO/PAKEHA ○ PASIFIKA ○ OTHER ○

Is English your first language? YES ○ NO ○

What is your current accommodation? COLLEGE ○ RENTING ○ PARENTS ○ AT HOME ○ OTHER ○

Are you in paid employment?

YES ○ NO ○ **If YES: No. of hrs p/wk:** < 10 ○ 11 - 20 ○ 21 - 29 ○ > 30 ○

Part B - Learning Satisfaction Assessment

Please rate the following statements by filling in the dots like this → ● with your response from **VERY IMPORTANT** to **NOT IMPORTANT**.

		Very Important				Not Important
I am satisfied with my learning when my lecturer:						
1	shows respect to students.	○	○	○	○	○
2	helps us feel comfortable to ask questions.	○	○	○	○	○
3	genuinely cares about our learning.	○	○	○	○	○
4	ensures good class understanding before moving on.	○	○	○	○	○
5	speaks clearly.	○	○	○	○	○
6	can explain content well.	○	○	○	○	○
7	speaks at an easy to follow pace.	○	○	○	○	○
8	speaks without a monotone.	○	○	○	○	○
9	uses clear explanations and definitions.	○	○	○	○	○
10	sticks to the topic.	○	○	○	○	○
11	makes lecture slides available on blackboard before class.	○	○	○	○	○
12	provides podcasts.	○	○	○	○	○
13	uses lecture slides to introduce, present and summarise lecture material.	○	○	○	○	○

Please rate the following statements by filling in the dots like this → ● with your response from **STRONGLY AGREE** to **STRONGLY DISAGREE**.

		Strongly Agree	Agree	Slightly Agree	Neutral	Slightly Disagree	Disagree	Strongly Disagree
My learning is more effective when:								
14	there is good interaction between the class and the lecturer.	○	○	○	○	○	○	○
15	the lecturer is enthusiastic about the subject.	○	○	○	○	○	○	○
16	the lecturer makes going to class interesting.	○	○	○	○	○	○	○
17	relevant lecture materials are available before class.	○	○	○	○	○	○	○
18	the lecturer is accessible outside of class.	○	○	○	○	○	○	○
19	there are relevant examples to work through after class.	○	○	○	○	○	○	○
Textbooks can help me to learn effectively when:								
20	they complement other learning material.	○	○	○	○	○	○	○
21	they provide further detail on lecture topics.	○	○	○	○	○	○	○
22	the end of chapter questions can be used to check my learning.	○	○	○	○	○	○	○
23	they relate well to the lecture.	○	○	○	○	○	○	○
Peer support can help me to learn effectively when there is/are:								
24	discussion amongst students.	○	○	○	○	○	○	○
25	smaller groups for study.	○	○	○	○	○	○	○
26	equal contribution from participants.	○	○	○	○	○	○	○
I am satisfied when:								
27	the lecture is not interrupted by outside noise.	○	○	○	○	○	○	○
28	the distance for classes that follow each other is close for walking.	○	○	○	○	○	○	○
29	the timetable for classes/tutorials is convenient.	○	○	○	○	○	○	○
I am satisfied when the lecture room:								
30	is at a suitable temperature.	○	○	○	○	○	○	○
31	has comfortable furniture.	○	○	○	○	○	○	○
32	has adequate lighting.	○	○	○	○	○	○	○
33	has a good sound system.	○	○	○	○	○	○	○
34	is clean and tidy.	○	○	○	○	○	○	○
35	has good wi-fi available.	○	○	○	○	○	○	○
36	**Overall I am satisfied with the quality of BSNS 107.**	○	○	○	○	○	○	○

Please indicate your answers for questions 37 and 38 by filling in the dot like this → ● on the scale below.
The scale range is between **0% (least preferred) to 100% (most preferred).**

37 What proportion of class time should be used for lecturing versus other interactive/group activities?

○	○	○	○	○	○	○	○	○	○	○
0%	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%

38 What proportion of the time should the lecturer spend on working through examples in class?

○	○	○	○	○	○	○	○	○	○	○
0%	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%

Part C - Learning Styles Questionnaire (LSQ)

This questionnaire is designed to find out your preferred learning style(s).

Please fill in the corresponding dot like this →● to show if you AGREE or DISAGREE with the statement.

		Agree	Disagree
1	I often take reasonable risks if they're justified.	○	○
2	I tend to solve problems using a step by step approach, avoiding creative ideas.	○	○
3	I tend to have a 'no-nonsense' direct approach.	○	○
4	I often find that actions based on feelings are as sound as those based on thoughts and analysis.	○	○
5	The key factor in deciding on ideas or solutions is whether they will work in practice or not.	○	○
6	When I hear about a new idea or approach, I like to start working out how to apply it in practice as soon as possible.	○	○
7	I like to follow a self-disciplined approach, with clear routines and logical thinking patterns.	○	○
8	I take pride in doing a thorough, logical job.	○	○
9	I get on best with logical, analytical people and not so well with spontaneous 'irrational' people.	○	○
10	I take care over the interpretation of data available to me, and avoid making quick conclusions.	○	○
11	I like to reach a decision carefully, after thinking about many alternatives.	○	○
12	I'm attracted more to new, unusual ideas than to practical ones.	○	○
13	I dislike situations that I can't fit into a pattern.	○	○
14	I like to relate my actions to general principles.	○	○
15	In meetings I tend to go straight to the discussion topic.	○	○
16	I prefer to have as many sources of information as possible – the more, the better.	○	○
17	People who don't take things seriously enough irritate me.	○	○
18	I prefer to respond to events on a spontaneous, flexible basis, rather than planning things out.	○	○
19	I dislike tight deadlines, as I need more time to think.	○	○
20	I judge people's ideas on their practical qualities.	○	○
21	I get irritated by people who rush into things.	○	○
22	The present is more important than the past or the future.	○	○
23	I think decisions based on thorough analysis are better than those based on instinct.	○	○
24	I enjoy contributing ideas just as they occur to me.	○	○
25	On average I tend to talk more than I should.	○	○
26	In meetings, I get impatient when people lose sight of the objective.	○	○
27	I like telling others my ideas and opinions.	○	○
28	People in meetings should be realistic, keep to the point and avoid indulging in fancy ideas.	○	○
29	I like to think about alternatives before deciding.	○	○
30	In meetings I think I am objective and unemotional.	○	○
31	At meetings I'm more likely to keep in the background rather than taking the lead.	○	○
32	On average I prefer listening to talking.	○	○
33	Usually I think the results justify the method used.	○	○
34	Group objectives and targets should take priority over individual feelings and objections.	○	○
35	I do whatever is needed to get the job done.	○	○
36	I get bored with detailed, routine work.	○	○
37	I like exploring underlying theories and principles.	○	○
38	I like well ordered meetings, sticking to the agenda.	○	○
39	I steer clear of one-sided/uncertain topics.	○	○
40	I enjoy the drama/excitement of a crisis.	○	○

Please add any other comments concerning your learning experience in the space below:

Student Learning Experience and Satisfaction Questionnaire (LA)

Please note that this research has University of Otago Ethics approval and that your answers will remain CONFIDENTIAL. Part A is for demographic purposes and is required for authorisation and verification. Part B of the survey relates to your satisfaction in learning. Part C relates to learning skills. Please answer all questions as honestly as possible. Thank you for your co-operation.

PART A - Demographic Information

Fill in like this →●

Student ID Code:

Enter your student ID number and fill in the corresponding dots.

ID:							
	⓪	⓪	⓪	⓪	⓪	⓪	⓪
	①	①	①	①	①	①	①
	②	②	②	②	②	②	②
	③	③	③	③	③	③	③
	④	④	④	④	④	④	④
	⑤	⑤	⑤	⑤	⑤	⑤	⑤
	⑥	⑥	⑥	⑥	⑥	⑥	⑥
	⑦	⑦	⑦	⑦	⑦	⑦	⑦
	⑧	⑧	⑧	⑧	⑧	⑧	⑧
	⑨	⑨	⑨	⑨	⑨	⑨	⑨

Gender: F ○ M ○

Age: 17 - 21 ○ 22 - 30 ○ > 30 ○

What degree are you currently enrolled in?

BCOM ○ BCOM/LLB ○ BA ○ BCOM/BA ○ BSC ○ BCOM/BS ○ OTHER ○

What is/are your intended major subject(s)?

ACCT ○ ECON ○ FINA ○ INF.SCI ○ INTL.BUS ○ MKTG ○ MGMT ○ TOURSM ○ OTHER ○

How many years (including this one) of university/polytech studies have you undertaken?

1 yr ① 2 yrs ② 3 yrs ③ 4 yrs ④ 5 yrs ⑤

What ethnic group do you identify with?

ASIAN ○ EUROPEAN ○ INDIAN ○ MAORI ○ NZ EURO/PAKEHA ○ PASIFIKA ○ OTHER ○

Is English your first language? YES ○ NO ○

What is your current accommodation? COLLEGE ○ RENTING ○ PARENTS ○ AT HOME ○ OTHER ○

Are you in paid employment?

YES ○ NO ○ **If YES: No. of hrs p/wk:** < 10 ○ 11 - 20 ○ 21 - 29 ○ > 30 ○

Part B - Learning Satisfaction Assessment

Please rate the following statements by filling in the dots like this → ● with your response from **VERY IMPORTANT** to **NOT IMPORTANT**.

		Very Important				Not Important
I am satisfied with my learning when my lecturer:						
1	shows respect to students.	○	○	○	○	○
2	helps us feel comfortable to ask questions.	○	○	○	○	○
3	genuinely cares about our learning.	○	○	○	○	○
4	ensures good class understanding before moving on.	○	○	○	○	○
5	speaks clearly.	○	○	○	○	○
6	can explain content well.	○	○	○	○	○
7	speaks at an easy to follow pace.	○	○	○	○	○
8	speaks without a monotone.	○	○	○	○	○
9	uses clear explanations and definitions.	○	○	○	○	○
10	sticks to the topic.	○	○	○	○	○
11	makes lecture slides available on blackboard before class.	○	○	○	○	○
12	provides podcasts.	○	○	○	○	○
13	uses lecture slides to introduce, present and summarise lecture material.	○	○	○	○	○

Please rate the following statements by filling in the dots like this → ● with your response from **STRONGLY AGREE** to **STRONGLY DISAGREE**.

		Strongly Agree	Agree	Slightly Agree	Neutral	Slightly Disagree	Disagree	Strongly Disagree
My learning is more effective when:								
14	there is good interaction between the class and the lecturer.	○	○	○	○	○	○	○
15	the lecturer is enthusiastic about the subject.	○	○	○	○	○	○	○
16	the lecturer makes going to class interesting.	○	○	○	○	○	○	○
17	relevant lecture materials are available before class.	○	○	○	○	○	○	○
18	the lecturer is accessible outside of class.	○	○	○	○	○	○	○
19	there are relevant examples to work through after class.	○	○	○	○	○	○	○
Textbooks can help me to learn effectively when:								
20	they complement other learning material.	○	○	○	○	○	○	○
21	they provide further detail on lecture topics.	○	○	○	○	○	○	○
22	the end of chapter questions can be used to check my learning.	○	○	○	○	○	○	○
23	they relate well to the lecture.	○	○	○	○	○	○	○
Peer support can help me to learn effectively when there is/are:								
24	discussion amongst students.	○	○	○	○	○	○	○
25	smaller groups for study.	○	○	○	○	○	○	○
26	equal contribution from participants.	○	○	○	○	○	○	○
I am satisfied when:								
27	the lecture is not interrupted by outside noise.	○	○	○	○	○	○	○
28	the distance for classes that follow each other is close for walking.	○	○	○	○	○	○	○
29	the timetable for classes/tutorials is convenient.	○	○	○	○	○	○	○
I am satisfied when the lecture room:								
30	is at a suitable temperature.	○	○	○	○	○	○	○
31	has comfortable furniture.	○	○	○	○	○	○	○
32	has adequate lighting.	○	○	○	○	○	○	○
33	has a good sound system.	○	○	○	○	○	○	○
34	is clean and tidy.	○	○	○	○	○	○	○
35	has good wi-fi available.	○	○	○	○	○	○	○
36	**Overall I am satisfied with the quality of BSNS 107.**	○	○	○	○	○	○	○

Please indicate your answers for questions 37 and 38 by filling in the dot like this → ● on the scale below.
The scale range is between **0% (least preferred) to 100% (most preferred).**

37 What proportion of class time should be used for lecturing versus other interactive/group activities?

○	○	○	○	○	○	○	○	○	○	○
0%	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%

38 What proportion of the time should the lecturer spend on working through examples in class?

○	○	○	○	○	○	○	○	○	○	○
0%	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%

Part C Learning Approaches Questionnaire (R-SPQ-2F)

This questionnaire has a number of questions about your approach to studying. If you think your answer to a question would depend on the subject being studied, give the answer that would apply to the subject(s) most important to you.

A — this item is never or only rarely true of me
B — this item is sometimes true of me
C — this item is true of me about half the time
D — this item is frequently true of me
E — this item is always or almost always true of me

		Never or only rarely true of me A	Sometimes true of me B	True of me about half the time C	Frequently true of me D	Always or almost always true of me E
1	I find that at times studying gives me a feeling of deep personal satisfaction.	○	○	○	○	○
2	I have to do enough work on a topic so I can form my own conclusions before I am satisfied.	○	○	○	○	○
3	My aim is to pass the course while doing as little work as possible.	○	○	○	○	○
4	I only study seriously what's given out in class or in the course outlines.	○	○	○	○	○
5	I feel that virtually any topic can be highly interesting once I get into it.	○	○	○	○	○
6	I find most new topics interesting and often spend extra time trying to obtain more information about them.	○	○	○	○	○
7	I do not find my course very interesting so I keep my work to a minimum.	○	○	○	○	○
8	I learn some things by going over and over them until I know them by heart even if I do not understand them.	○	○	○	○	○
9	I find that studying academic topics can at times be as exciting as a good book or movie.	○	○	○	○	○
10	I test myself on important topics until I understand them completely.	○	○	○	○	○
11	I find I can get by in most assessments by memorising key topics rather than trying to understand them.	○	○	○	○	○
12	I generally restrict my study to what is specifically set. I think it is unnecessary to do anything extra.	○	○	○	○	○
13	I work hard at my studies because I find the material interesting.	○	○	○	○	○
14	I spend a lot of my free time finding out more about interesting topics which have been discussed in different classes.	○	○	○	○	○
15	I find it is not helpful to study topics in depth. It is confusing and wastes time, when all you need is a general understanding of the topics.	○	○	○	○	○
16	I believe that lecturers shouldn't expect students to spend significant amounts of time studying material everyone knows won't be examined.	○	○	○	○	○
17	I come to most classes with questions in mind that I want answering.	○	○	○	○	○
18	I make a point of looking at most of the suggested readings that go with the lectures.	○	○	○	○	○
19	I see no point in learning material which is not likely to be in the examination.	○	○	○	○	○
20	I find the best way to pass examinations is to try to remember answers to possible questions.	○	○	○	○	○

Please add any other comments concerning your learning experience in the space below:

Appendix B: Demographic characteristics of respondents

Table 18. Gender and Age Responses to Survey

Age Range	*Gender*			*All Genders*
	Female	*Male*	*Not answered*	
17-21	242	210	3	455
22-30	40	33	0	73
31+	5	8	1	14
Not answered	2	4	0	6
All Ages	292	252	4	548

Table 19. Race–Ethnicity Responses to Survey

Ethnic Label	*No. of respondents identifying with this label*
European[a]	342
Asian[b]	135
Māori	18
Indian	16
Pacific Islands (small states and colonies in the Pacific Ocean)	10
Other responses	27
Total	548

[a] includes, among others, New Zealand born people of European descent

[b] refers to people from Asia of Chinese, Japanese, Korean ethnicity and indigenes of neighbouring East Asian and South-East Asian countries (it excludes India, Pakistan, Sri Lanka and Bangladesh (see Indian); and Arabia and North-West Asia)

Figure 20. Participants (N=548) by University

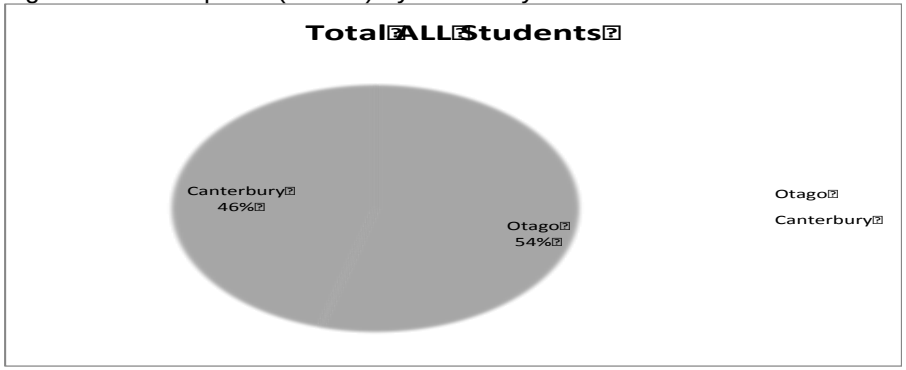


Figure 20 provides a breakdown of the percentage of participants enrolled at Canterbury and Otago.

Figure 21. Participants (N=548) by Gender and University

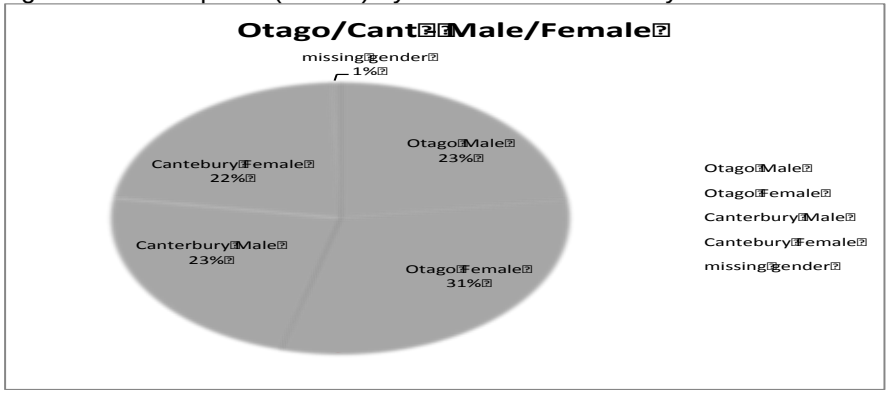


Figure 21 provides a breakdown of the percentage of participants enrolled at Canterbury and Otago by gender.

Figure 22. Otago Participants (N=298) by Gender, Course and Survey Mode

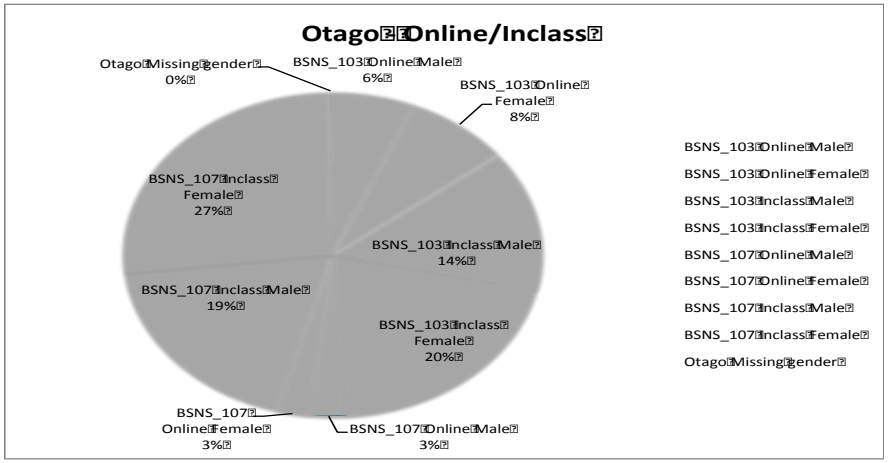


Figure 23. Canterbury Participants (N=250) by Gender, Course and Study Stage

Figure 24. Participants Aged 17–21 years (N=455) by Gender and University

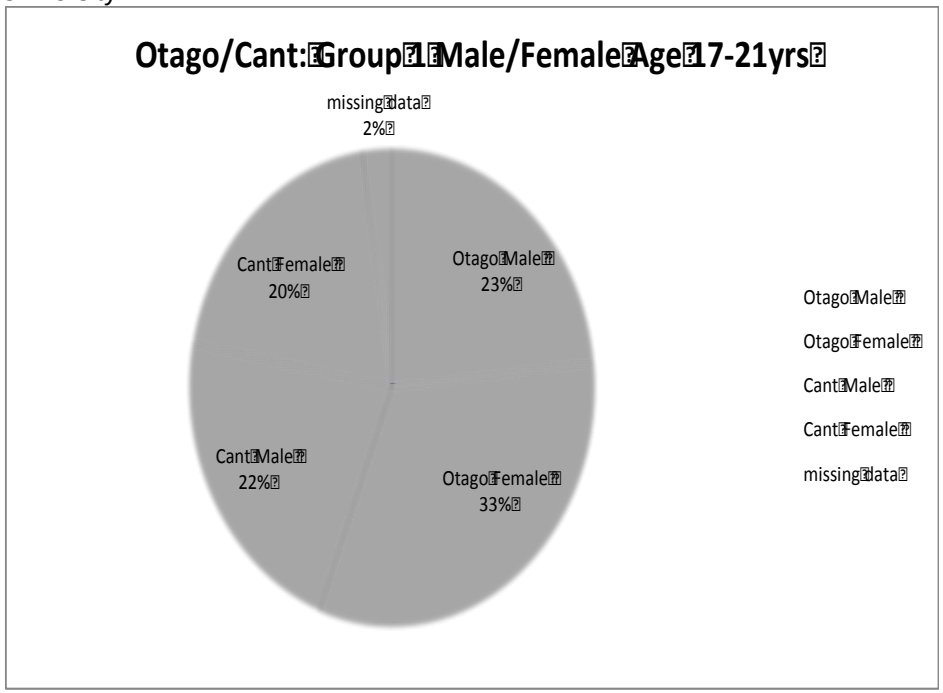


Figure 25. Participants Aged 22–30 Years (N=73) by Gender and University

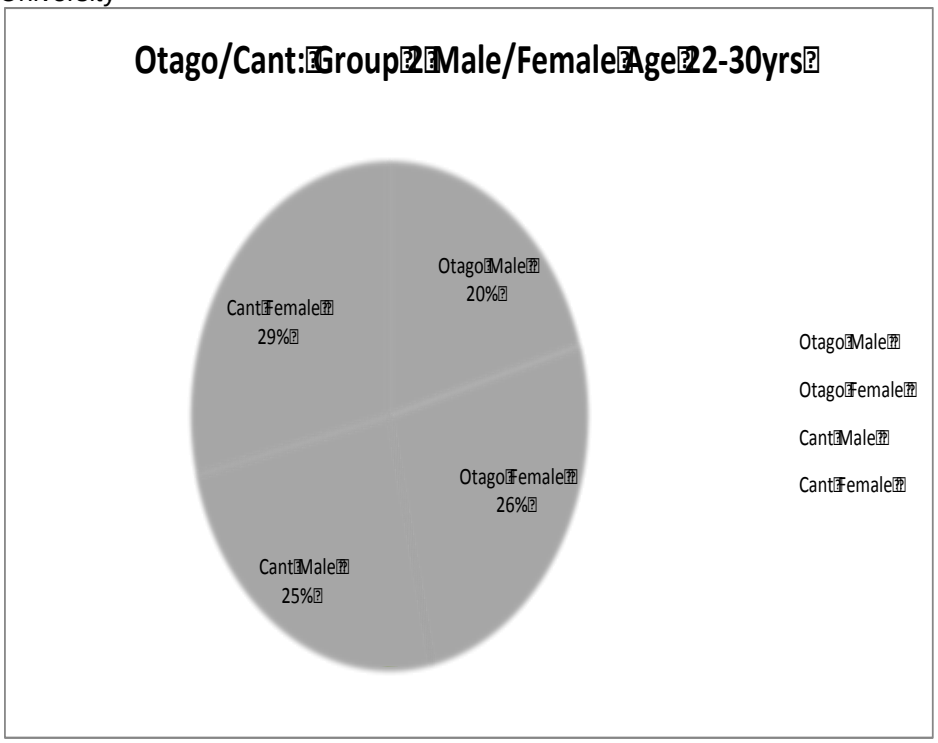
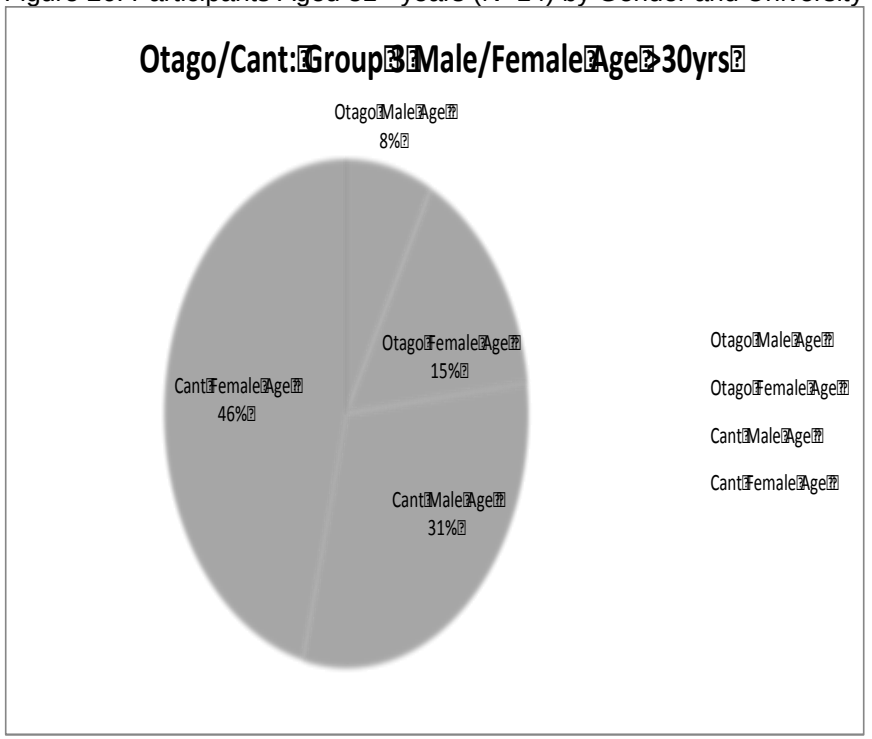


Figure 26. Participants Aged 31+ years (N=14) by Gender and University



Appendix C:

Rough Guide I for Lecturing Effectiveness

Before lectures

- Preparing for lectures: (1) Select topic; (2) Read relevant materials including textbooks, journal articles and newspaper articles; (3) Think of examples that students can relate to; (4) Prepare a lecture outline; (5) Select background readings for students; (6) Prepare lecture slides and other supplementary material (e.g. extra notes, audio or video summaries, etc.), being mindful of the time available to cover the material in lectures; (7) Ensure learning materials are available to students; (8) Inform students (by email) of the learning plan for the topic and why it is important for students to learn about the chosen topic.

During lectures

- General behaviours: Be punctual; Have a friendly, approachable manner; Use humour where appropriate; Ask questions and encourage students to ask and answer questions; connect lecture to prior and future lectures, so that students know how the current lecture fits into the course as a whole.
- Use of technology: PowerPoint should be a teaching aid, not “the teacher”; Use mobile phones or clickers to enhance interaction; Show short clips to reinforce key points or facilitate discussion (e.g. YouTube).
- Structure of lecture: Be mindful that an average person’s attention span is 15 minutes, so there should be frequent ‘change’ during the lecture (e.g. show a clip, change topics, ask students a question, ask students to discuss a question with their peers, or give students a 5 minute break); Have a clear and concise introduction and conclusion; Pace the lecture well so that the lecturer does not ‘rush’ through material (e.g. skip slides).

After lectures

- Clarify any issues that arise at a lecture by email or at the beginning of the next lecture.
- Provide students with a brief summary of the lecture, remind them of the key points, and give them additional tasks to complete (e.g. to prepare for the next lecture, tutorial or test, you will need to…)
- Make sure students are aware of how they can get extra help, e.g. lecturer’s office hours, online discussion forums, online resources, tutorial support, etc.

Rough Guide II for Lecturing Effectiveness

Undergraduate students are largely strategic learners, motivated mostly by assessment but with a range of further motivations, and there are exceptions. As far as possible, a lecturer (or learning facilitator) should work on this assumption; and should try to get students to get the best out of themselves, in particular striving for deep learning. Knowing what students are expecting to do with the learning in the long run is important but may be unknowable. For accountant students, the lecturer is entitled to work on the assumption that students are intent on being accountants, although should they change their minds, the learning should still be useful in life, including work and contributing to society generally.

The lecturer is a course designer as well as a course deliverer, possibly as part of a delivery team; and is the assessor/examiner. The course can be likened to a journey. Functionally, it comprises structure, process, a schedule of events, learning outcomes (or similar aims, targets, objectives), assessment, learning materials, learning resources, an electronic page or pages accessible to students via the Internet (with such facilities as a news or course announcements forum, learning and teaching fora, formative and summative assessment/assignment handling (including hand-in, Turnitin, marking and feedback and return of work facilities), space for an interactive programme of learning or scheduled learning programme or learning materials for viewing and downloading, sharing of stuff and communicating among course participants, group work, virtual cooperative and/or collaborative work), and physical learning facilities. Socially, it comprises philosophy, culture, participants (students and teachers), learning interactions, other social interactions, and a learning environment. Students are doing other courses, and have diverse lives outside study. They bring a range of knowledge, understanding, attitudes, expectations, etc. to the course. The teaching team and the lecturer likewise. The course design should fit the students. Staging the course is as much art as science, notably using expertise, even trial and error, to adjust the course in response to formative evaluation of events and arriving at the (revised) journey’s end.

Lectures are often part of a course schedule, part of course structure and part of the learning facilities (hence lecture theatre). Other courses have lectures. Lectures are the name used on the university timetable to refer to periods of 50-minute hours, or multiples thereof, into which each day of each week of each term and/or semester is divided or arranged. Students have expectations of the lecture event from previous semesters' or years' experiences of courses, and other courses they are doing alongside the course a lecturer is planning. Lecture theatres and most other teaching areas are arranged in rows of seats for students with a desk or table or bench in front, all facing the projector screen(s) and whiteboards and area at the front where the lecturer stands or moves around in. Although these spaces can be used for alternatives to lectures, this is difficult physically, socially and institutionally.

The format of lectures is laid down for the lecturer by the timetable and the room arrangement, and by the students' expectations and experiences. Further features are the PowerPoint file and projection expectations and the expectation that the lecture will be available as a recording after the lecture right up to the end of course assessment, normally a closed book, time limited exam individually handwritten by each student. Many students expect the answers to the questions on the exam paper to be somewhere on the PowerPoint slides.

The lecture is but one choice a course designer has in designing the course of learning and assessment, and even if used as part of the design and included on the schedule of events, the designer can use the lecture (or different lectures) in a variety of ways; and can format the lecture or lectures accordingly. Alternatively, the course designer can opt out of course design except to allocate topics and lecture slots on the institutional course timetable, and leave lecturers to get on with it; and muddle through in similar ways in respect of tests and exams, marking, staging of tutorials (if any), and use of the increasingly obligatory "virtual learning environment" or "course management system" (e.g., Blackboard, MOODLE) as a mere printed material distribution mechanism. The course designer can leave out lectures from a course, or use the official lecture slots on the timetable for alternative forms of formal and semi-formal learning, including cooperative and/or collaborative work centred on and involving active learning and assessment among students. The choice to use lectures or not use them, or only use some of them, and use the formal timetabled time for class meetings for other purposes should be taken for reasons associated with the rest of the design, but if not used then the possible repercussions must be weighed up, including repercussions from students, other lecturers and institutional figures. No one has to be convinced that seeming to behave like most other people is acceptable; behaving in contrary fashion needs to be defended, even if there is ample coverage in the (accounting) education literature that lectures are not always the best way to facilitate learning and those responsible for academic development courses and similar at an institution say and do likewise.

Lectures are like horses, they are good on some courses but not others, mainly because of what the students are capable of learning and that it is not knowledge that counts but how one has come to know and understand and apply and behave, and synthesise and criticise and evaluate and continue to learn. On the last point, the lecture is not a static thing but a dynamic thing, for both students and lecturers. They come together with their pre-lecture knowledge, etc. and they leave with an enthusiasm and some means of continuing to advance and reassess and reflect between the pre-lecture knowledge and everything they experienced in the lecture, or the alternative form used in the lecture time slot. What the learning facilitator prepares them for before the lecturer and how the learning facilitator reinforces that, etc. after the lecture is as vital as the lecture time experience itself.

Appendix D: Summary of Research Studies on Accounting and Other Education Selected from the Review

Authors (Year)	*Research Question(s)*	*Research Method*	*Key Findings*	*Comments and Critique*
1. Learning Environment				
Allan (1996)	To clarify what constitutes learning outcomes and their association with behaviourism; and the implications for their implementation.	Literature review and deductive argument based on participation	Dichotomy between learning and teaching intentions; Learning outcomes express expectations about student achievement, including the core subject-based outcomes, personal transferable outcomes, and generic academic outcomes; the more that learning objectives are clearly expressed as subject-specific, personal transferable, and academic outcomes, the more the learner is able to concentrate on what he/she needs to know in order to succeed on a given module or course	Very rational, mechanistic, including in approach to behaviour(ism)
Aquino and Vermette (2013)	Developing and testing a model of mentoring between an accounting teacher and an education mentor	Action research	Learning is related to the style of teaching and delivery, Change in style by the teacher changed the students, as measured by their evaluations of the teacher and their course results. Use of an expert mentor was seen as key. Institutional support is important to bringing this off.	Seems obvious! However, as many lecturers do not do this, then perhaps not so. Or perhaps lecturers are unwilling to let things get “out of hand”. And perhaps they do not like to involve experts and mentors.

Authors (Year)	*Research Question(s)*	*Research Method*	*Key Findings*	*Comments and Critique*
1. Learning Environment				
Bentley, Brewer and Eaton (2009)	How can accounting students be motivated to prepare for and engage during lectures in a large class setting?	Action research with mixed methods: Designed and implemented "hot seat" approach used in classes of about 90 students; This involved asking a randomly chosen student questions in lectures; Survey of students' perceptions of new approach; 277 students across 6 iterations of the course provided quantitative and qualitative feedback.	The feedback from students was very positive towards the "hot seat" approach. The students' ratings of and grades in the course compared favourably to other accounting courses at the university. The "hot seat" approach motivated students, but did not result in students' grades being significantly higher than those in other accounting courses are.	Bentley et al.'s study details an innovation teaching method that improves student motivation. However, students' grades did not appear to be significantly improved. Does the "hot seat" approach have value beyond making lectures more entertaining, or are there other reasons why students struggle with invigilated assessment?
Bond, Czernkowski and Wells (2012)	To renew a large undergraduate financial reporting subject	Action research with quantitative and qualitative data to evaluate change	Student concentration and engagement is enhanced with various adds on to the lectures (e.g., videos, putting spotlight on particular cases, communicating with students about issues and if they seemed to be falling behind, etc.)	Showing enthusiasm and making the subject accessible and the learning more interesting results in better results. Requires more effort and time!
Bruce (2001)	To measure reflection-for-action, reflection-on-action, and reflection-in-action during a undergraduate business course	Experiment among teams engaged in a marketing computerised simulation	Envisages learning as a product and a process, involving the acquisition of knowledge, skills, meanings, beliefs and values because of activities, reflections and other processes experienced by the learner. Experiment was inconclusive other than outcomes depended on characteristics and abilities of learners	Brings out social complexity of learning and learners. "Definition" of learning is in the literature review part of the paper.

Authors (Year)	*Research Question(s)*	*Research Method*	*Key Findings*	*Comments and Critique*
1. Learning Environment				
Dillon (2013)	To show how encountering Socrates and engaging Plato's dialogues can help professors achieve many of the laudable humanistic goals they have for their students.	Thematic analysis of course outlines; course participant-observation, experience, review, argument. Constructivist in approach.	Enumerates various techniques inside and outside the classroom for engaging students instead of the "standard textbook" and "lectures" approach.	Contains a section on "the problems with lectures (and PowerPoint slides)": author argues that the lecture cannot promote thought or change attitudes without (1) time for students to reformulate and digest what they have heard, (2) vivid instructional experiences, (3) dialogue between students and professor.
Hidalgo-Cabrillana and Lopez-Mayan (2015)	What attributes make a teacher more successful than another in enhancing students' performance? Seeks a better understanding of the relationship between in-class work and student outcomes.	Analyses maths and reading competencies using equivalent of PATs results and contextual information collected alongside. Statistical analysis. Traditional = rote learning, individual work, or textbooks; Modern = use of real-world problem solving, group work, or computers.	Modern practices are related to better student achievement, while traditional teaching, if anything, is detrimental. However, other factors come into consideration as well.	Set in Spanish schools. Not exactly hands-on.
Hill (1998)	Does class size affect learning outcomes in an accounting course?	Natural experiment: For two introductory accounting courses, there were two groups: Students in a large class (~120) and students in small classes (~40 students).	While there were no performance differences (measured by student grades) between those in small and large classes, students did prefer small classes.	Hill's findings support the use of the traditional lecture format, where students in large classes with a lecturer delivering material from the front of the class.
Karna and Julin (2015)	To evaluate and discuss the extent of the satisfaction as perceived by the students and staff towards university facilities and services	Statistical survey and assessment	Student and academic satisfaction with facilities and services contribute to the strategic value of the working and learning environment	Set in Finland. Notes that learning in higher education institutions occurs not only in classrooms and lectures but also in informal ad hoc spaces and through social interaction

Authors (Year)	*Research Question(s)*	*Research Method*	*Key Findings*	*Comments and Critique*
1. Learning Environment				
Lord and Robertson (2006)	What are accounting students' perceptions of learning? Whom do accounting students perceive as being responsible for student learning?	Qualitative: Opened-ended questions; survey of 49 students.	Students' perception of learning was mainly consistent with two of Marton et al.'s (1993) categories: knowledge and understanding. Most students' perceptions were consistent with surface, not deep learning. Students perceived that they and teachers are jointly responsible for learning, although teachers were more responsible.	Lord and Robertson's study indicates that key tenants of the education discipline need to be included in the business curriculum in order to help students understand what learning is, how it occurs and why deep learning is more desirable than surface learning.
McLaughlin and Faulkner (2012)	Examines what students expect from university facilities	Student interviews about their engagement with university and in particular their learning styles in the physical environment	Learning occurs in formal and informal settings; timetabling of facilities dictates teaching style and constrains opportunities for collaborative learning; active learning occurs mostly away from the classroom, in informal, ad hoc spaces; students want flexible learning spaces that can adapt to both individual and collaborative work with a strong emphasis on social learning and advanced technology. The responses also indicate a mismatch between existing lecture theatres and tutorial rooms and the third space learning that these students want.	Set in Australia Makes a clear physical distinction between teaching and learning

Authors (Year)	*Research Question(s)*	*Research Method*	*Key Findings*	*Comments and Critique*
1. Learning Environment				
Murdoch and Guy (2002)	Hypothesis: "Students in small classes emphasizing group activities will perform better on analytical problems and essay questions than students in large classes emphasizing group activities." (p.273)	Quantitative: A university's data on student characteristics and performance (e.g. GPA). Data were gathered on 82 students in the small classes (37–40 students per class) and 174 students in the large class.	The results supported the hypothesis. This implies group activities are less beneficial in large than in small classes. However, it is does not imply that group activities in a large class have no benefit.	Given the financial constraints that universities have been facing in recent times, it is difficult apply Murdoch and Guy's results by having small classes.
Nouri and Shahid (2008)	Does providing lecture notes when PowerPoint is used for class presentation affect student performance and attitudes toward instructor	Experiment	The results suggest that students who receive PowerPoint lecture notes perceive the instructor is less receptive to student concerns, does not use the class time efficiently, and is less effective in teaching.	Student views seem perverse, except given their understandable state of ignorance (hence their need/choice to learn) they may interpret the notes as the lecturer having failed to appreciate their want of ready-meal type lessons/food for brains.
Lopez-Perez, Perez-Lopez and Rodriguez-Ariza (2011)	To consider improvements in teaching methods based on new technologies in the context of achieving a better outcome and to reduce student drop out	Survey of students involved in a recently implemented version of a first year accounting course	Blended learning with traditional classroom methods and online learning increases student motivation, complementing the traditional face-to-face component of lecturing, and reduces drop out	Results are open to interpretation. There was no control group. The researchers were enthusiastic about blended learning.
Stice and Stocks (2000)	To identify factors affecting the effectiveness of teaching			
Sugahara and Boland (2006)	Is accounting students' preference for the use of PowerPoint in lectures associated with their exam marks?	Quantitative: Data from a survey of 189 students and their exam marks.	There was a negative relationship between a preference for PowerPoint and exam marks. Students who preferred lecturers to use the whiteboard only also had statistically significantly higher marks in their exam.	The findings give lecturers reason to question their use of PowerPoint. Further, lecturers should attempt to account for different student preferences when deciding how to deliver material to students.

Authors (Year)	*Research Question(s)*	*Research Method*	*Key Findings*	*Comments and Critique*
1. Learning Environment				
Umbach and Porter (2002)	What impact do individual characteristics such as race, gender, age, grade point average, and transfer status have on student satisfaction and students' perceptions of the impact of their college experience on skill development? What effect do academic departments have on student satisfaction and students' perceptions of the impact of their college experience on skill development?	Qualitative study using data collected from formal course evaluations, the learning management system and a student focus group,	Learners value online activities, they are nevertheless still unwilling to forgo the opportunities which face-to-face contact with both peers and faculty members present.	Small sample size. The study did not consider the impact of blended learning on students' soft, or generic, skills.
Weil, De Silva and Ward (2014)	How a blended learning approach does affects student participation and engagement?	Course evaluations, focus group student records	While learners value online activities, they are nevertheless still unwilling to forgo the opportunities which face-to-face contact with both peers and faculty members present. This finding provides support for the continuation of a blended learning approach in the course, as well as its implementation in others.	Not very deep or reflective. Based on one course run by the authors. Wider academics views not incorporated.

Authors (Year)	*Research Question(s)*	*Research Method*	*Key Findings*	*Comments and Critique*
1. Learning Environment				
Xiao and Dyson (1999)	Investigates student perceptions of good accounting teaching and considers whether or not good teaching is good irrespective of the subject discipline	Repertory grid technique with data from undergraduate students in three universities in Beijing	most important characteristics of good teachers are being knowledgeable, adopting effective teaching approaches, being responsible and conscientious, making teaching interesting, encouraging and facilitating independent thinking, and providing moral and behavioural guidance. Characteristics same for accounting and non-accounting subjects	

Authors (Year)	*Research Question(s)*	*Research Method*	*Key Findings*	*Comments and Critique*
2. Educator Characteristics				
Adler and Milne (1995)	How to promote student-centred learning?	Action research that links an undergraduate management accounting course's design with principles of lifelong learning.	The need for student-centred learning that promotes students' lifelong learning skills has been argued for in the education literature and called for by various accounting professional bodies. This paper shows how management accounting educators can heed these calls through curriculum redesigns.	The paper is descriptive. It does not specifically test the impact of the curriculum design changes on student satisfaction and/or performance.

Authors (Year)	***Research Question(s)***	***Research Method***	***Key Findings***	***Comments and Critique***
2. Educator Characteristics				
Adler and Milne (1997)	To what extent do New Zealand accounting educators use active learning approaches?	Content analysis of course syllabi and interviews with tertiary accounting educators.	New Zealand educators rarely used active learning approaches. Part of the reason for their underuse was due to educators' preference for more "efficient" lecturing approaches and part of their underuse was a function of the then New Zealand Society of Accountants failure to encourage their use in their *Admission Policy*.	The paper identifies a set of educator and institutional impediments to the use of active learning approaches. The data are cross sectional, however, and may have not captured attempts that are more recent by accounting educators to adopt more active learning approaches, although later work shows that this has remained a problem (see Adler et al. 2000).
Adler et al. (2000)	What impediments are preventing accounting educators from adopting active learning approaches?	Empirical analysis featuring interviews with and a survey of accounting educators.	Three broad groupings of impediments were identified: lack of student readiness, inadequate educator support mechanisms, and non-reflective educator practices.	The paper was based on identifying impediments that are preventing accounting educators from implementing active learning approaches, as being called for by the various accounting professional bodies. The focus was on uncovering root causes of these educational practice failures. Therefore, readers must not see the results as assessing or describing typical educational practice.

Authors (Year)	*Research Question(s)*	*Research Method*	*Key Findings*	*Comments and Critique*
2. Educator Characteristics				
Dyson and Godfrey (1997) (as reviewed in Xiao & Dyson, 1999)	Investigates student perceptions of good accounting teaching and considers whether or not good teaching is good irrespective of the subject discipline	Repertory grid technique with data from undergraduate students in six universities in New Zealand	Found following characteristics in order of importance: teacher's concern and respect for students, friendliness of the teacher, clarity and understandability, teacher's preparation, organization of the course, teacher's encouragement of questions and discussion, and openness to opinions of others, personality characteristics of the teachers, teacher's knowledge of the subject, teacher's availability and helpfulness, nature and usefulness of supplementary materials and teaching aids, teacher's stimulation of interest in the course and its subject matter, nature and value of the course materials, teacher's sensitivity to, and concern with, class level and progress, teacher's enthusiasm for the subject and for teaching, nature, quality, and frequency of feedback from the teacher to students, teacher's elocutionary skills, teacher motivates students to do their best(higher standard of performance required), teacher's intellectual expansiveness, clarity of course objectives and requirements, intellectual challenge and encouragement of independent thought, instructor's fairness and quality of examinations, teacher's productivity in research and related activities	Not published in a refereed form

Authors (Year)	*Research Question(s)*	*Research Method*	*Key Findings*	*Comments and Critique*
2. Educator Characteristics				
Fox (1994)	Is accounting and business students' performance in exams associated with their perceptions of lecturer effectiveness?	Quantitative: Data on lecturer effectiveness gathered with a survey of 493 students; Students' exam marks measured the learning outcome.	While there was a weak correlation between measures of lecturer effectiveness and exam marks, one on measure ('choice of teaching aids') had a statistically significant negative correlation.	Fox's findings show that there is not a direct relationship between perceptions of lecturer effectiveness and exam marks. The relationship is likely to be highly complex and contingent.
Guney (2009)	What factors affect the performance of non-accounting degree students in undergraduate compulsory accounting modules?	Quantitative: Use an econometric model to explain academic performance as a function of independent factors.	Smaller classes are better. Better teacher training for new lecturers is needed. Numeracy strength helps performance, strong link between performance and class attendance, financial difficulties may affect performance, older students perform better, and doing more study does not necessarily lead to higher grades.	Student's perception of teaching quality are subjective, the study uses one institution with cross-sectional data. Need a longitudinal study from a wider group of educational institutions. Student response was measured after examination results were released. Results using a matched sample of ACCT majors would be useful.
Handal, Wood and Muchatuta (2011)	What are business students' expectations about teaching and learning?	Qualitative: Interviews with 23 business students about their opinions and experiences.	Students expect lecturers to explain why topics are important, have question time in lectures, and provide students with individual feedback on their progress.	Handal et al.'s findings are consistent with other studies. However, meeting students' expectations is difficult in resource-constrained universities.
Jaskyte, Taylor and Smariga (2009)	What does innovative teaching mean for students and academics?	Qualitative: Interviews with 48 academics and 50 students from 20 departments in a US university.	Academics and students had similar perceptions of innovative teaching. They did not define innovative teaching in terms of the novelty of the teaching methods or aids. Instead, they emphasised the lecturer's personality and style of presentation.	Jaskyte et al.'s subjects, academic and students, appear to be identified characteristics of lecturing effectiveness, rather than innovative teaching. These characteristics, however, are consistent with other studies.

Authors (Year)	*Research Question(s)*	*Research Method*	*Key Findings*	*Comments and Critique*
2. Educator Characteristics				
Long, Ibrahim and Kowang (2014)	Are students equally satisfied with all lecturer competencies?	Quantitative: Survey of 258 students on their satisfaction with multiple lecturer competencies.	Students expressed more satisfaction with lecturers' knowledge of the subject, teaching creativity, and interaction with them than other competencies.	Long et al.'s study did not ask students to rate the importance of each competency and did not study the relationship between student satisfaction and their grades,
Lord and Robertson (2006)	What are accounting students' perceptions of learning? Whom do accounting students perceive as being responsible for student learning?	Qualitative: Opened-ended questions; survey of 49 students.	Students' perception of learning was mainly consistent with two of Marton et al.'s (1993) categories: knowledge and understanding. Most students' perceptions were consistent with surface, not deep learning. Students perceived that they and teachers are jointly responsible for learning, although teachers were more responsible.	Lord and Robertson's study indicates that key tenants of the education discipline need to be included in the business curriculum in order to help students understand what learning is, how it occurs and why deep learning is more desirable than surface learning.
Miller, Stocks and Proctor (2010)	What student perceptions characterize the effective accounting professor?	This two-phase study incorporates both a between-subjects decision-making experiment and a ranking instrument to measure the importance of various faculty attributes of teaching effectiveness.	Undergraduate and graduate students perceive a contribution toward teaching effectiveness when a hypothetical accounting professor is described as actively conducting and publishing relevant research and incorporating research findings into the classroom experience.	Participating universities in the experiment are not chosen randomly. The indirect measure of students' perceptions of the impact of research on teaching effectiveness is used in the study. The study measures perceptions rather than choosing an accounting professor.

Authors (Year)	*Research Question(s)*	*Research Method*	*Key Findings*	*Comments and Critique*
2. Educator Characteristics				
Mowbray (2010)	To what extent do lecturers who complete a public speaking training course improve their lecturing effectiveness?	Action research with mixed methods: Interview and survey data from 11 lecturers; survey and performance (e.g. grades) data from students.	Lecturers who participated in the public speaking training course felt that they were more confident and better lecturers as a result. Students did not rate the participating lecturers as being better than before they completed the training course or compared to other lecturers. However, students of the participating lecturers performed better in exams than other students.	This and other studies are suggestive of student teaching evaluations being weakly or negatively correlated with student performance in assessment. Mowbray's findings indicate that there are practical steps for lectures to follow in order to improve their lecturing effectiveness.
Stout and Wygal (2010)	What are award-winning accounting lecturers' perceptions of lecturer behaviours that impede student learning?	Qualitative: Survey of 105 academics.	Five general negative behaviours were identified: Uncaring attitude, poor preparation, poor delivery, assessment mistakes and a rigid demeanour.	Stout and Wygal's study does not assess why the subjects are award winning; the main assumption is that award-winning educators are knowledgeable on education.
Wygal and Stout (2011)	What are award-winning accounting lecturers' perceptions of how academics can improve their lecturing effectiveness?	Qualitative: Survey of 105 academics.	To improve lecturing effectiveness, lecturers should be committed to continuous improvement, be actively supported (e.g. by a mentor) and periodically renew their teaching style.	Wygal and Stout's study is normative and its findings should therefore be applied with caution.
Wygal, Watty and Stout (2014)	How do award-winning accounting lecturers define teaching effectiveness?	Qualitative: Survey of 22 academics.	Five general improvements were identified: Student focus, commitment, emphasis on preparation, ability to link topics and practice, and other lecturer characteristics	Wygal and Stout's study is normative and its findings should therefore be applied with caution.

Authors (Year)	*Research Question(s)*	*Research Method*	*Key Findings*	*Comments and Critique*
3. Student Characteristics				

Authors (Year)	*Research Question(s)*	*Research Method*	*Key Findings*	*Comments and Critique*
3. Student Characteristics				
Adler, Milne and Stringer (2000)	What impediments are preventing accounting educators from adopting active learning approaches?	Empirical analysis featuring interviews with and a survey of accounting educators.	Three broad groupings of impediments were identified: lack of student readiness, inadequate educator support mechanisms, and non-reflective educator practices.	The paper was based on identifying the impediments that were preventing accounting educators from implementing active learning approaches, as being called for by the various accounting professional bodies. The focus was on uncovering root causes of these educational practice failures. Therefore, readers must not see the results as assessing or describing typical educational practice.
Adler, Whiting and Wynn-Williams (2004)	Are some business case study approaches (student versus teacher-led) better than others?	Empirical analysis featuring a quasi-experimental design.	Student-led business case studies were associated with students' adoption of more balanced learning style approaches as measured by Honey and Mumford's (1986) Learning-Style Inventory (LSI).	The paper shows that it is not so much a function of whether case studies are used but more a function of how they are used that impacts student learning and in particular their approach to learning. The paper features the typical caveats relating to generalizability.
Carty and Baker (2014)	Do accounting students perceive of any differences between accounting courses that do and do not use technology (e.g. clickers)?	Quantitative: Survey of 170 students.	Students preferred problem-based lectures and practice questions irrespective of the use of technology.	Accounting is a discipline that is learnt though doing. However, students' grades in courses with and without technology were not studied.

Authors (Year)	*Research Question(s)*	*Research Method*	*Key Findings*	*Comments and Critique*
3. Student Characteristics				
Gruber, Fub, Voss and Glaser-Zikuda (2010)	How do students perceive the services they are offered at a German university and how satisfied they are with them?	Evaluation study measuring 15 dimensions of student satisfaction. Questionnaires were handed out in eight lectures for the pilot study and 18 lectures for the main study.	Students' satisfaction with their university is based on a relatively stable person-environment relationship. Students were particularly satisfied with the school placements and the atmosphere among students. Students were mostly dissatisfied with the university buildings and the quality of the lecture theatres.	As the study involved only two samples of students from one university, the results cannot be generalized to the German student population as a whole.
Kavanagh and Drennan (2008)	What are students' perceptions and employers' expectations of the professional skills that graduates should possess?	Quantitative: Survey of 322 students and 38 practitioners.	Students and employers have different views, although both rank analytical skills as very important. Oral and written communications skills are also important, but the authors note that oral communication is not emphasised in accounting courses.	Kavanagh and Drennan's findings are consistent with other studies on the differences between the views of students and employers. However, few studies have observed accountants in action in order to confirm/refute the findings of survey-based research.
Lord and Robertson (2006)	What are accounting students' perceptions of learning? Whom do accounting students perceive as being responsible for student learning?	Qualitative: Opened-ended questions; survey of 49 students.	Students' perception of learning was mainly consistent with two of Marton et al.'s (1993) categories: knowledge and understanding. Most students' perceptions were consistent with surface, not deep learning. Students perceived that they and teachers are jointly responsible for learning, although teachers were more responsible.	Lord and Robertson's study indicates that key tenants of the education discipline need to be included in the business curriculum in order to help students understand what learning is, how it occurs and why deep learning is more desirable than surface learning.