The Experience of Deep Learning by Accounting Students

By

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Abstract

Accounting students need to develop personal capabilities such as critical thinking skills. To do this, they need to experience deep learning. This study examines how to support accounting students to experience deep learning. A sample of 81 students in a third year undergraduate accounting course was studied employing a phenomenographic research approach, using ten assessed learning tasks for each student (as well as a focus group and student surveys) to measure their experience of how they learn. A key finding is that it is possible to support a large proportion of students to experience deep learning through use of Assessment involving individualised, authentic learning tasks with regular formative feedback as part of an integrated set of interventions. An implication of this study is the need to support accounting students to experience deep learning in first year courses to enable them to develop personal capabilities in their later university studies.
1. Introduction

The ‘approach to learning’ conceptualisation sees human learning as taking place not simply within an individual but in relationship to a learning context. Two qualitatively distinct and different ways students can relate to their learning context are surface and deep learning. A student’s response to their learning context, that is their approach to learning, will lead to qualitatively different and distinct types of learning outcomes. In particular, unless students experience deep learning it is unlikely they will develop capabilities in areas such as critical thinking, creative thinking, problem-solving, communication and teamwork (Trigwell and Prosser, 1991; Marton and Booth, 1997) nor are they likely to be able to understand social and critical perspectives of accounting (Boyce et al., 2012). There is evidence a large proportion of students in accounting courses experience surface learning (Eley, 1992; Booth et al., 1999; Byrne et al., 2009; Andon et al., 2010); as well as students in many disciplines (Baeten et al., 2010). This study examines how an integrated set of interventions can support students to experience deep learning when studying accounting in a third-year undergraduate course.

This paper outlines the theoretical background and research question of this study. The research method is then discussed. A phenomenographic approach was adopted, using the assessed learning tasks (rather than student interviews) as the key measures of students’ experience of approach to learning, supplemented by a focus group, critical incident questionnaires (CIQs) and student surveys. This study applied to an accounting course an integrated set of interventions of Assessment, Teamwork, Teacher-Student Relationship and Instruction. These interventions are described along with the data analysis used. The results and key findings are then discussed, as well as some of the limitations of this study.

2. Theoretical background and research question

Approach to learning research focuses on how students approach their learning in specific learning contexts. A student’s approach to learning is not a personal characteristic of a student but rather a way of describing how a student interacts with a particular learning task (Marton, 1988; Biggs, 1993). This relational perspective sees a student’s approach to learning as being either surface or deep (Marton and Säljö, 1976). The approach to learning which students experience in response to their learning context will lead to qualitatively different and distinct types of learning outcomes. In particular, there is evidence that students who experience surface learning are unlikely to develop personal capabilities (Trigwell and Prosser, 1991).

Deep learning typically focuses on understanding and developing personal meaning, and in particular integrating new material into pre-existing knowledge and thus changing the way a person sees aspects of reality. In contrast, surface learning focuses on completing task requirements, relies on memory and seeks to reproduce clear-cut, black-and-white facts from experts with little or no personal understanding.

Approach to learning research in the educational psychology literature has identified general categories of human learning processes by studying students’ experiences of their learning in the context of specific learning tasks, such as reading a text, writing an essay or solving a problem. Four key aspects of learning that have been identified and studied are relevance structure (Marton and Booth, 1997), conception of learning (Säljö, 1979; Marton et al., 1993); motivation (Fransson, 1977; Marton and Säljö, 1997) and approach to learning. A key insight of the approach to learning conception of human learning is that students are unlikely to experience deep learning unless they first experience high-level relevance structures, high-level conceptions of learning and intrinsic motivation; and unless they first experience deep learning, they are unlikely to make the cognitive effort to experience change in
capabilities such as critical thinking (Trigwell and Prosser, 1991; Marton and Booth, 1997). Since one important aspect of context is the discipline being studied, it is important to carry out research not just with isolated learning tasks (such as reading a text) but in the context of tertiary courses in specific disciplines such as accounting (Lucas and Mladenovic, 2004).

The theoretical model that was used in this study is set out as Figure 1 below.

**Figure 1: How Students Experience Learning Accounting in a University Course**

This model shows four key aspects of how accounting students learn accounting (relevance structure, conception of learning, motivation and approach to learning) and the internal relations between them. It also shows how the approach to learning experienced by accounting students is a necessary but not sufficient precondition to the development of personal capabilities or competencies such as critical thinking.

This study examined the experience of accounting students of each of these four key aspects of learning. Findings concerning relevance structure, conception of learning and motivation are provided in other articles (Turner & Baskerville, 2011a, 2011b & 2011c).

This study has addressed the following research question:

In what ways can students be supported to experience deep learning in an accounting course?

The motivation for this study is to provide evidence of whether and if so, in what ways, accounting students can be supported to experience deep learning. Previous research has found supporting deep learning to be a challenging issue for accounting students (English et al, 2004; Hall et al, 2004; Ballantine et al, 2008; Fox et al, 2010); and also for students in a range of other disciplines including, for example, education, science, psychology, nursing and medicine (Baeten et al, 2010). Also, these previous studies did not include interventions designed to support students to
experience three preconditions for them to experience deep learning: high-level relevance structures, high-level conceptions of learning and intrinsic motivation. Marton and Säljö (1997) have noted the ‘profound’ difficulties in supporting students to experience deep learning. A review of various studies across a range of disciplines designed to stimulate deep learning concluded that “[t]he mixed findings [from these studies] make clear that influencing students’ approaches towards deep learning ... is a complex process” (Baeten et al, 2010: 4). This study seeks to provide some further insights into this challenging issue.

3. Research Method

The study introduced into a third-year undergraduate accounting course Assessment involving individualised, authentic learning tasks with regular formative feedback, as part of an integrated set of interventions (Teamwork, Teacher-Student Relationship and Instruction). This was designed to support accounting students to experience deep learning. Taking a second-order perspective and using phenomenography as the research approach, the effect of these interventions on the way students experience deep learning in an accounting course was examined. Five stages of a major Assignment and five session preparation assignments (SPAs), supplemented by a focus group, critical incident questionnaires (CIQs) and student surveys, were designed to identify and capture the ways students experience deep learning.

Participants

This study examined the experience of learning of 81 students in a third-year undergraduate accounting course in financial statement analysis in New Zealand in July-October 2008: 51% had English as a second language, 52% were female (and 48% male), 95% were majoring in accounting in a business degree and 45% expected to complete their university studies upon completion of this course (with a further 19% unsure whether they would complete their studies upon completion of this course).

Interventions

In this study, the influence of the concept of constructive alignment (Biggs, 1999) can be seen in the central importance of Assessment within a comprehensive set of interdependent interventions aligned to support students to experience change in the ways they experience how they learn in a university course. The Assessment involved structured, sequenced assignments in which students received regular formative feedback, involving:

- one large Assignment (broken into five stages) (75% of the total assessment for the course).
- five reflective session preparation assignments (SPAs) (25% of the total assessment for the course).

The Assignment and SPAs involved individualised, authentic assessments with regular formative feedback. They also included questions to support students to reflect on and discuss different aspects of their experience of learning.

The Assignment involved each student analysing a different listed New Zealand or Australian company (that is, were ‘individualised’ for each student); and adapting the concepts and ideas taught in the course to a real company (that is, were ‘authentic’ in the sense they were “designed to give students ‘real-world’ experiences” (Stein et al, 2004: 240)). For each stage of the Assignment, there were increasingly no ‘right’ or ‘wrong’ answers, as the analysis and valuation of companies increasingly depended on uncertain information, such as students’ own forecasts of an uncertain future.
The SPAs involved students reading before classes and recording their personal reflections on key concepts in the readings. They were a structured form of learning journal. The SPAs were designed to be ‘authentic’ in the sense that “learning experiences are perceived as authentic when they engage students’ lived experience…” (Stein et al., 2004: 240). They were also ‘individualised’ as each student brought their own different perspectives and backgrounds to their personal engagement with the readings.

The readings included a draft textbook (Turner, 2008) and other materials designed to support deep learning. These readings were integrated into the assessed learning tasks (which included spreadsheets for each company) used to support the Assessment. The five stages of the Assignment, the five SPAs and the spreadsheets are available from the corresponding author. A sub-set (100) of the spreadsheets used is available online (Turner, 2011). Besides a grade, students were given formative feedback on completion of each of the five stages of the Assignment and of the five SPAs. This feedback involved individual feedback, provided to each student by the same marker throughout the course; general feedback from the teacher to all students; and exemplars of other students’ work.

A range of cooperative learning techniques were employed to support students to engage in Teamwork. These included use of study groups of 3-5 students, being heterogeneous groups in relation to domestic and international students. Students sat in their study groups in lectures. Also, cooperative learning techniques were used in lectures, particularly small group discussions by students within their study groups. There were a range of online supports (such as discussion boards, online journals and wikis) to facilitate teamwork and two workshops designed to support team building within the study groups and to address challenges faced by students in experiencing Teamwork. There were also 25 ‘Happy Hours’ (voluntary, informal, small group mentoring sessions) and two informal Class Lunches.

In the Assignment and SPAs students were required to answer questions about the outcomes of discussions with other students and the insights of other students. As each student had a different firm they could freely share their work with others. Teamwork was central to improving the quality of students’ judgements, allowing students to draw on the prior knowledge and previous experience of others and to consider issues being faced with other firms. The social aspect of learning was emphasised by using cooperative learning techniques and by an Assessment that required quality judgements which were improved by Teamwork.

The key aspects of the Teacher-Student Relationship were an informal, student-centred and facilitative teaching style where ‘right’ answers were not imposed but curiosity, questioning and exploration were encouraged (Ramsden, 2003; Fink, 2003). The Teacher-Student Relationship also included direct instruction through lectures. As the students had completed the pre-readings before each lecture by completing their SPAs, lectures supported students to reflect on and deepen their understanding about key concepts rather than to simply transmit facts and concepts.

Instruction included explicit instruction on conceptions of learning; use of reading materials with a deep approach to learning embedded in them (Nijhuis et al., 2005); and use of authentic examples (including the application of concepts to an exemplar company) in both lectures and reading materials (Herrington and Kervin, 2007).

**Phenomenography**

This study adopted a phenomenographic approach. Phenomenography seeks to describe aspects of the world as others see them and takes a second-order perspective. It is particularly effective for handling research questions relevant to student learning in an educational context where the most fundamental aspect of
learning is considered to be the way students experience phenomenon (such as approach to learning). The purpose of phenomenographic research is the identification of variation in the ways of experiencing phenomenon (Marton and Booth, 1997). Phenomenography focuses on the ways of experiencing a phenomenon, not on the psychological or cognitive processes in a person (Marton, 1988; Biggs, 1993). For example, ‘approach to learning’ is not viewed as something internal psychologically or cognitively to a student but is viewed as ways of experiencing how a student learns within the particular learning context of an accounting course. Generalisability of the findings comes from the generalisability of the context and content of learning in the course examined in this study to other situations.

In this study, the key measures of students’ experience of approach to learning were the assessed learning tasks: five stages of a major Assignment and five SPAs. This data provided a rich source of material to identify and capture students’ experience of approach to learning in the context of an accounting course. Students were able to comment on their experience of learning and also demonstrate the outcomes of their learning while they were completing the learning tasks. The data collection method used in this study has the advantage of capturing the experience of students’ learning while students are completing the assessed learning tasks, rather than subsequently in interviews. There are inherent risks of bias when using assessed learning tasks. These risks were to some extent mitigated by students providing some evidence in their assessed learning tasks for comments they made about aspects of their experience of learning.

This data was supplemented by a focus group (comprising 16% of students in the course), nine critical incident questionnaires (CIQs) (response rates of between 96% and 100% of students in the course) and various other surveys from students (including a pre-course survey and an Assessment Experience Questionnaire). Critical incidents are vivid happenings that people remember as being significant (Brookfield, 1995). The CIQs comprised five questions, each of which asked students to write down some details about events that happened in the classes that week. The questions were adapted from the CIQ example included in Brookfield (1995: 115).

Data analysis

Five stages of the Assignment and five SPAs for each of the 81 students in the course were coded to a number of themes using N-Vivo software (some of which were predetermined while others emerged during the coding process). In this way, 523 quotes were coded to the theme of ‘Deep Learning’. A transcript of the focus group and responses from the critical incident questionnaires (CIQs) were also coded without using computer software. These various extracted quotes were reviewed several times by the first named researcher, who was also the lecturer in the course. This led to the development of a number of sub-themes (some of which were predetermined while others emerged during the coding process). There was no third-party expert review or audit of the data analysis. As a result, there are risks of conflicts of interest and to objectivity in the data analysis. This was in part mitigated by delaying the data analysis until about six to twelve months after completion of the course.

In addition, results from various student surveys were analysed to gain background information on the students (as a group) and on their overall perceptions about key aspects of this study, such as Assessment. The narratives from students reported in this study are referred to as quotes from “Student”, usually without any further indicator. The narratives have been edited based on a ‘standardized’ approach, where the wording and meaning are preserved but some editing is done for spelling
and grammar in order to facilitate the reading and accessibility of the quotes (Weiss, 1994; Sandelowski, 1994).

4. Results

A key finding of this study was that a large proportion of students were able to experience deep learning in an accounting course, and that they were able to begin to experience deep learning at an early stage in the course. Given their extensive previous experience of surface learning (Gow et al., 1994; Byrne et al., 2010), the adjustments and challenges for students to experience deep learning were considerable. The experience of intrinsic motivation was critical to support students to persevere through these challenges.

In this study there was evidence accounting students could quickly make the adjustment to begin to experience deep learning in the early stages of an accounting course:

I think that students will learn to ‘find themselves’ in this course. Some may hate it and others may love it. For me, I hated it for the first week but then I saw the benefit of the style of this course and I began to adapt to it...

Student

The course was a twelve week course. Through an analysis of the five stages of the Assignment and the five SPAs from each student, it was possible to map a cumulative distribution of when there was first evidence that each student started to experience deep learning in the course. The results of this analysis are set out in Figure 2 below.

Figure 2 indicates that about 60% of students first gave evidence of experiencing deep learning by the end of Week 1 of the course, increasing to about 90% by the
end of Week 6 and about 96% by the end of Week 12 (the last week of the course). This evidence was comments by students indicating experience of characteristic features of deep learning. Less than 5% of students gave no evidence of experiencing deep learning. A central finding of this study is that in response to the integrated set of interventions, accounting students were able to make adjustments in just a few weeks to experience deep learning in an accounting course.

**Understanding**

The use of different, real companies for each student was a critical element in the design of learning tasks that supported students to seek understanding rather than simply regurgitate material. As students had different, real companies, it was not possible to adapt and apply to their firms the concepts being studied without first understanding the concepts. For example, students needed to understand the concept of ‘comprehensive income’:

> I was hoping that there is some list that can tell me all items that should be under comprehensive income ... however I have realized that ... it is up to me to understand what ‘comprehensive income’ (CI) is and be able to make a prudent judgement in classifying those items. It takes some time to understand what CI is ... but I do realize that this is the only way for me to really learn from university, instead of just memorising every list and replicate it in the assignment.

*Student*

Students also experienced going beyond accepting the accounting numbers at face value to seeking to understand their meaning; that is to understand what the accounting numbers tell them about the economic and business realities of their firms. This involved students moving from a focus on the ‘signs’ (the accounting numbers) which is the surface level, to a focus on the ‘signified’ (the meaning behind the accounting numbers) which is the deep level:

> ...accounting ... numbers [by themselves] actually mean nothing. Only the qualitative factors behind the numbers would be able to tell us the meaning.

*Student*

**Confidence**

The experience of deep learning presented students with a number of challenges. To meet these challenges required an experience by students of confidence in their own learning capacities and in their abilities to make judgements. The experience of confidence by students was categorised during the data analysis into two qualitatively distinct ways: ‘Lack of Confidence’ and ‘Empowering Confidence’. ‘Lack of Confidence’ is the experience of feeling overwhelmed, disempowered and defeated by the looming uncertainties, lack of clarity and ‘shades of grey’ involved in deep learning. ‘Empowering Confidence’ is the experience of curiosity, interest and confidence to proceed with the assessed learning tasks in the face of the looming uncertainties, lack of clarity and ‘shades of grey’ involved in deep learning.

Accounting as a discipline can attract people who like clear-cut, black-and-white answers (Eley, 1992; Booth *et al.*, 1999), and the realisation that there are no clear-cut answers but a reliance on judgements that may not turn out to be ‘right’ (for example, with forecasting) can be disturbing to accounting students:
I get so frustrated … I just cannot cope with this amount of speculation and guesswork. Part of the reason I am doing accounting is I like the fact that there is a right or wrong answer…”

_Student_

There was evidence a key reason students experienced ‘Lack of Confidence’ in their capacities to learn for understanding and developing personal meaning and to make the judgements required of them in the assessed learning tasks was their limited previous experience of doing these things in an accounting course (Booth et al, 1999; Byrne et al, 2009):

...I am ... sceptical of my abilities, mostly due to the fact that I have been a passive learner and relied on my abilities to rote learn and regurgitate to the examiner and anticipate what will be expected in assessments to get a good grade.

_Student_

This lack of previous experience of deep learning in an accounting course contributed to a sense of confusion, of being lost, or of being overwhelmed by the uncertainties and ‘shades of grey’ involved in the experience of deep learning:

...it looks like the journey is all uphill from here and I am beginning to doubt that there is a light at the end of the tunnel!

_Student_

There was also a need for students to be authentic and ‘real’ when experiencing deep learning. It was no longer possible to ‘pretend’ they knew something if all they had was a superficial knowledge of clear-cut, black-and-white facts with little or no real, personal understanding. Deep learning required a degree of personal honesty, authenticity and openness by students about what they really understood:

At the start of this course I ... felt reluctant to share my feelings in the SPAs and Assignments ... what was lurking underneath this reluctance was embarrassment ... I guess I felt silly admitting that I didn’t know how to interpret financial statements or know what adds value in a firm, because surely at the end of my degree I should be able to.

_Student_

There was evidence students could experience ‘Empowering Confidence’ at an early stage in the course:

...I have little idea of where to start ... It looks a little daunting right now and does not make much sense, but I’m confident of producing good work given some time.

_Student (Week 1)_

As they began to realise what would be required to make the judgements necessary to complete the learning tasks, students were supported to experience ‘Empowering Confidence’:

But isn’t it pretty risky to follow just your own judgement? How about if my judgement is wrong? Very hard to learn! After I read more about it, working hard, attention to details and able to take risk, it could actually work.

_Student_
There was evidence students were supported to experience ‘Empowering Confidence’ by awareness that careful analysis can give the basis for confidence in making personal judgements:

It is very important to form our confidence to make judgments ... how can we believe the decision is right? ... Do you trust yourself? Why or why not? ... I would like to know how people can develop their confidence to make judgments ... Fortunately, I found the answer ... Proper analysis ... [gives] our judgments more credibility...

*Student*

There was also a relationship between the experience by students of understanding their firm – the actual activities of their firm, its business environment and the reality of its business – and the way they experienced confidence in meeting the later challenges of deep learning of making increasingly difficult judgements, forecasts and assessments about their firm. Personally understanding their firm gave students a sense of having some foundation, something to build on, a basis on which they could form their judgements about the value of their firm:

While I found forecasting reasonably tricky (and had to really think) and time consuming, I didn’t feel lost or unconfident about my forecasts. Why? Well because by now I really have come to understand [my firm]! I understand what is driving the business and its key accounting drivers.

*Student*

**Cognitive difficulties**

As students began to experience deep learning in the course they also began to experience the cognitive difficulties and effort experiencing deep learning required of them:

One thing I’ve learnt from this course is that thinking about things critically and analysing statements takes time (and also hurts and is tiring)...

*Student*

These difficulties could lead to a feeling of resentment by students as they struggled to adjust to the unexpected cognitive effort and time involved with experiencing deep learning:

I am finding it hard ... to move from the listen, read, learn & regurgitate method of other courses to the thinking and involvement of this paper ... I felt resentment and bitterness at [the teacher’s] way of learning...

*Student*

As students confronted the cognitive difficulties and effort required of them to experience deep learning they could experience ‘Lack of Confidence’ and feel a need for more guidance:

I would like some guidance and help to work out what I need to look for, what seems to be important for the firm. I don’t need it to be spoon fed to me, just a bit of guidance as to where to start.

*Student*

**Intrinsic motivation**
Intrinsic motivation occurs when a student experiences doing the learning task as an ‘end in itself’, something that is inherently interesting or in some way satisfying for them (Amabile, 1993). The experience of intrinsic motivation in the learning tasks was essential to support students to persevere and make the significant cognitive effort to overcome the challenges to experiencing deep learning:

While reading financial statements can seem daunting at first, I have become far more aware of how extremely useful and interesting they are, if you spend quality time with them. After reading for a while, I found I was actually enjoying reading [my firm’s] financial statements and I was eager to read further to learn and understand more.

*Student*

Students found the experience of deep learning rewarding and enjoyable, which reinforced and supported their developing intrinsic motivation:

…the encouragement this course has given students to question everything and [to] think through their answers … I’ve thoroughly enjoyed doing it this way … I value this knowledge/experience more than I first thought possible.

*Student*

There was also evidence that students were able to experience ‘Empowering Confidence’ in response to their experience of deep learning and intrinsic motivation:

As well as problems I also have learned a lot and so I am already looking forward to learning more as we continue. Not only am I learning about the [concepts] but the more time I spend with the financial statements [of my firm] the more I realise how all the numbers link together and affect each other. As I learn more I am sure I will start to gain a much clearer view of, not only [how] the numbers on the page are connected, but also how … the actual business activities link in together too.

*Student*

As they experienced deep learning, aspects of the learning tasks that were challenging and difficult, such as a lack of clear-cut, black-and-white answers, became no longer negatives but positives for students:

Another thing that I enjoyed when I [did] my assignment is that there is no right or wrong answer...

*Student*

**Assessment**

Assessment played a central role to support accounting students to experience deep learning as they completed the assessed learning tasks. The application of the concepts in the course to their individual, real firm supported students to develop understanding and personal meaning about these concepts, such as the use of discounting in the valuation model they applied to their firm:

This course has also concreted facts and ideas into my head that previously were disconnected and appeared useless … Like discounting [which is part of the valuation model used in the course] … normally I may have struggled with having to remember how to discount. Because I had used it as a means to an end and not the end point itself, I actually just got down and did it ... There’s
something about the practical application of knowledge that facilitates knowledge in a way that reading and even made-up scenarios (no matter how life-like) could [n]ever achieve.

*Student*

Regular, formative feedback supported students to develop and deepen their understanding of the concepts step-by-step as they faced the considerable challenges of analysing their firms:

In my last SPA I commented that I didn’t have a clear understanding of the … [valuation] framework. After [the marker’s] feedback explaining that the framework can be summarised by key formulas or accounting relationships [it] started to click.

*Student*

The session preparation assignments (SPAs) supported students to read the course materials before classes to give an initial understanding of key concepts and ideas on which they could build further their own understanding and personal meaning:

Completing readings prior to classes aids a deeper understanding of the material: Knowledge and understanding of the material provides a platform for further learning and deep understanding rather than just superficial regurgitation. It is amazing sitting in class and not being under significant duress copying down notes frantically and having no clue what the material is actually about.

*Student*

The SPAs also supported students to engage with the materials critically and to seek their own understanding and personal meaning:

[The] SPAs … helped me develop a better understanding of the materials [at] my own pace. SPAs allowed me to spontaneously raise any questions I had about the readings and gave me the scope to engage with the materials at a deeper level by applying some of my personal experiences in the SPAs.

*Student*

An important aspect to the design of the SPAs was that the readings were written in such a way as to have a deep approach (and not a surface approach) to learning embedded in them:

… [the author] … explains difficult technical stuff in normal and everyday terms, and I particularly loved his comparisons and personal touches, also it being an accounting text book it isn’t as dry as you would expect it to be. Chapter Five – Predicting the Future, really brought everything together for me, and now I [am] just building more and more onto my knowledge.

*Student*

**Teamwork**

Also, Teamwork was an important means for students to understand the material being studied and to complete the assessed learning tasks:

To complete [stage 4 of the] Assignment, I realized my learning style has … changed, if I was not interacting with other students I would not be able to do this assignment … discussion with other students … help[s] me to understand more and learn more things
beyond the textbook ... I will have more discussions with my study group mates.

*Student*

Teamwork supported students to make the intuitive judgements needed to connect their firm’s accounting drivers and ratios to their economic and business drivers:

Our group discussion about our accounting drivers and ratios was very helpful ... it ... gave me exposure to three other different companies ... our discussion ... quickly turned to questions about what the economic reality was behind the drivers. We were immediately trying to understand what it was that had caused the ratios to be the way they were.

*Student*

There was also evidence students were able to interact meaningfully through online resources such as a discussion board, and students found these interactions could be highly significant in supporting their own experience of deep learning:

These three [students in the course] have a very good understanding of key drivers [for their firms] and how to interpret their results ... I believe they have gained great insights ... and by posting their knowledge on the discussion board they have helped with my learning immensely.

*Student*

There was also an awareness of the personal value of forming quality relationships with others in the course:

I can honestly say that without these people, I would not have been able to do well in the course. The people in class are the ones who have helped me ... gain a better understanding about various concepts that I had no idea of. Thanks to everyone especially ([the teacher and 11 named students] and others). This not only encouraged and built my confidence in what I have learnt in the course, but it also allowed me to get to know a lot of people and form great relationships with them...

*Student*

**Teacher-Student Relationship**

It was an important aspect of the intervention of Teacher-Student Relationship that the teacher did not act as ‘the expert’ and did not give the students clear-cut, black-and-white answers that were ‘correct’. Rather, to support and foster learning for understanding and developing personal meaning, the teacher asked questions, fostered discussion between students and supported students to develop their own opinions and views, which they can support with personally meaningful evidence:

...one of my group members complained how [the teacher] is not teaching us anything – he merely posts other people’s thoughts and reads them to class (and of course, he comments on those thoughts too). But I explained the benefit of him doing so i.e. we get to know what other people are thinking and what their opinions are. I told her how in this course, opinions really matter. [If the teacher] hadn’t done those things, I doubt I would know how to even form my own opinion ... he doesn’t expect us to reproduce what he said. Instead, he expects us to form our own view of the things he has said, and this is a skill which most of us lack. It
sounds like an easy task, but it is actually a skill that requires lots of practice. I’m glad I get to practice this skill in [this course].

Student

The teacher acted as a catalyst for students to reflect on and seek to understand concepts that were presented by the teacher, with strong linkages to authentic examples:

…I like the style of how the content is presented … it isn’t presented with ‘fact after fact’ but [the teacher] states the concept, defines it and then relates it back to a firm’s operations – this is very insightful.

Student

There was also evidence that it is important for students to feel the teacher is genuinely interested in their opinions, thoughts and reactions and to be encouraged to challenge the ideas being taught. Assessment can powerfully support the experience by students that the teacher is genuinely interested in their perspectives rather than in them simply regurgitating the ‘right answers’:

Throughout university we have almost been encouraged to accept the theories taught in our courses and not to question them – why would we question what a textbook says when we know that it will be marked correctly in the exam? My attitude changed completely when I embarked on [this course] … there was no exam, and the lecturer was genuinely interested in our thoughts on the various concepts presented to us, we were encouraged to challenge theories and create our own opinions...

Student

Instruction

An important intervention to support students to experience deep learning was the application of concepts in the readings and lectures to a real listed company, Ryman Healthcare. There was evidence this aspect of Instruction facilitated students to think conceptually and interacted with Assessment:

I especially liked how the chapter followed through as an example. It helped me to conceptualise and apply what the words were saying to a real life example. I feel this chapter is going to be invaluable for my future analysis of my firm.

Student

There was also evidence this aspect of Instruction helped students see the relevance and connection of the concepts to the real world:

Having the Ryman Healthcare example was … very useful as it provided a tangible illustration of the points being made. The five Ps [of strategy formation] were made much clearer when the Ryman example was used. The majority of textbooks would normally list concepts such as the “five Ps” with definitions. However, the only reason I have taken anything out of the five Ps concepts is because they were made relevant by using Ryman Healthcare.

Student
This supported students without directly giving them clear-cut answers as they needed to understand the concepts to be able to adapt them to the unique features of their own firm:

The Ryman example provided some great insight and things to think about when trying to connect the accounting drivers with the economic and business realities of the firm and then connecting these to forecasting the future. None of the specific accounting drivers, economic and business realities were relevant to my own firm but they definitely got me on a thought path of things to think about for my own firm.

Student

5. Limitations

This study has a number of limitations. Students in a third year accounting course in New Zealand was studied. Generalisability of the findings of this study is limited to the generalisability of the context and content of learning in the course to other situations. Also, assessment items completed by students were used as key measures of students’ experience of approach to learning. There are inherent risks of bias when using assessed items of work, where learners can write what they think the teacher wants to hear rather than what they are actually experiencing. These risks were to some extent mitigated by students providing some evidence in their assessed learning tasks for comments they made about aspects of their experience of learning.

Also, the data analysis was completed by the first named researcher, who was also the lecturer in the course. There was no third-party expert review or audit of the data analysis. As a result, there are risks of conflicts of interest and to objectivity in the data analysis. This was in part mitigated by delaying the data analysis until about six to twelve months after completion of the course.

6. Conclusion

A key finding from this study is that Assessment involving interesting, challenging assessed learning tasks that are individualised, authentic and with regular formative feedback, in the context of an integrated set of interventions (Teamwork, Teacher-Student Relationship and Instruction), can support a large proportion of students to experience deep learning in an accounting course.

Previous research in the accounting education literature found it difficult to support change by accounting students from surface to deep learning (English et al, 2004; Hall et al, 2004; Ballantine et al, 2008; Fox et al, 2010). These studies involved limited interventions to support deep learning with apparently many aspects of the design and delivery of the courses involving traditional approaches that could be seen as supporting surface learning (Boyce et al, 2001). The findings of these previous studies suggest limited interventions in the design and delivery of accounting courses have limited (if any) positive impact on the experience of approach to learning by accounting students. This study shows that an integrated set of interventions can support widespread change in the experience of approach to learning by accounting students in the early weeks of a course.

The experience of deep learning in an accounting course may provide a foundation for students to more readily experience deep learning in their subsequent accounting courses:
Perhaps people who have enjoyed this process [of deep learning] will be able to take this lesson away from the course and actively engage with future courses.

Student

The findings of this study suggest first year courses could be designed to support students to experience deep learning. If this could be achieved and if such experiences prove to be transferrable by students to their subsequent courses, this could have significant implications for the design of 2nd and 3rd year accounting courses. With the necessary pre-condition of experiencing deep learning in place for most students as a result of their experience of studying accounting in first year, such courses could then be designed to support students to develop personal capabilities as well as to understand social and critical perspectives of accounting. A key issue worthy of future research is to examine how to change the way accounting students learn in first year courses and the transferability of these experiences to their subsequent courses.

References


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