UNDERSTANDING ACCOUNTING STUDENTS’ 
LEARNING AND ITS RELATION TO 
ACADEMIC ACHIEVEMENT: 
AN EXPLORATORY CASE STUDY

Subject Area: Accounting I
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ABSTRACT:

This exploratory study aims to understand and uncover the contextual factors influencing accounting students’ learning conception and approach and how it relates to their academic achievement. Three students who achieved different levels of overall mark (High Distinction, Credit and Pass) were interviewed and was taken as a case study to identify and analyse their learning conception and approach. The findings suggest that the way students approach and perceive their learning experience may not always tantamount to an excellent overall mark. Further investigation is needed to understand how other contextual factors may affect student learning. Some of the factors identified by the respondents associated to ‘surface’ learning are time constraint, poor organisation, work and family commitment and the assessment structure. It appears that putting too much emphasis on the end of semester examination encourage students to defer learning until the assessment is fast approaching. On the other hand, the factors associated with ‘deep’ learning are: personal habit and/or previous experience, personal commitment to improve, perceived relevance to career, peer pressure and pressure to achieve good grades.

Key Words: Learning approach and conception; accounting students; academic achievement
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1.0 INTRODUCTION

Criticisms on accounting graduates’ inability to handle real life complex problems requiring cognitive abilities, analytical skills and broad understanding of real world issues has been prevalent in the accounting education literature for some time (see for example, American Accounting Association, Bedford Report, 1986; Sundem, et. al., 1990; Sharma, 1997). At the same time, numerous studies supporting the view that students organize their learning habits depending on how they perceive and approach their learning process abound in the higher education literature. Rebele, et. al. (1991), after conducting an extensive review of accounting education literature, suggested that nothing is more relevant to accounting educators than to identify and consider the contextual factors affecting student learning if we are to improve the educational experience of accounting students. Some of these contextual factors have been identified in the literature such as students’ interest and motivation (or lack thereof), past experiences, variations in teaching and differences in curriculum, for example, volume of work, assessment methods, perceived relevance and others (Fransson, 1977; Hounsel, 1997; Ramsden 1997).

It appeals to intuition that the common link between these bodies of research suggests that understanding the contextual factors affecting student learning could help improve students’ education experience and hopefully also improve their ability to handle real life complex problems. Whilst this may be true, it is also intuitive to assert that students are very much interested in their academic achievement as they obviously need to pass their subjects before they can graduate. Studies investigating the relationship between student academic achievement and learning conception and approach are limited. Mclean (2001) appears to have scratched the surface when she provided evidence that medical students who showed transformative learning (i.e. higher level learning conception) achieved better academic results than those who relied on memorization and recall learning (i.e. lower level learning conception).
This paper adds to this body of literature investigating the relationship between accounting student's academic achievement and their learning conception and approach. This exploratory study aims to understand and uncover the contextual factors influencing accounting students' learning conception and approach and how it relates to their academic achievement. Towards this end, the two-fold objectives of this study are:

- To understand how selected accounting students approach their learning tasks and relate it to their conception of learning.
- To uncover those contextual factors which influence student learning conception and approach and how they relate to their academic achievement.

The rest of this paper is organized as follows. The second part introduces the learning approach and conception literature. Part three provides the background to the case study and the methodology used. Part four presents the findings and discussion as well as some reflections and recommendations for further study. Finally, part five concludes.

2.0 LEARNING LITERATURE

2.1 Learning Approach

Higher education researchers have used the deep-surface dichotomy to understand how students approach their learning (Biggs, 1987; Entwistle, 1997). Students adopting the 'surface' approach are more oriented towards reproductive features of the message like memorising facts, formulas and details and by approaching course contents as discrete bits of information. On the other hand, students who are adopting the 'deep' approach show transformative features as they pay more attention to what the message means and how it relates to the real world, looking for patterns, examining logic and arguments and relating it to their past experiences. Studies conducted by well-known educators (Marton and Saljo, 1976; Marton and Wenestan, 1978 and Saljo, 1981) suggest that students who used a surface approach tend to misunderstand the context of what they are studying. On the other hand, those who adopt a deep approach are more likely to retain their knowledge for long periods of time and to apply it in the right context. Somewhere in between is the "strategic" approach.
whereby the student’s main intention is to achieve the highest possible mark by managing time and effort effectively and finding the right conditions and materials for studying which are all geared towards the teachers’ perceived preference.

2.2 Conceptions of Learning

To understand how students function in a learning environment, Saljo (1979) provided five categories of learning conception. This has been widely used in the literature (Gibbs, 1982; Ramsden, 1992). Marton, et. al. (1993), building on Saljo’s work expanded the five categories to six conceptions as shown in Table 1.

<table>
<thead>
<tr>
<th>Conception</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>A: Increasing knowledge</td>
<td>Learning is seen as quantitative increase in knowledge. Limited notion of using knowledge. This conception is the foundation by which all other conceptions develop.</td>
</tr>
<tr>
<td>B: Memorising and reproducing</td>
<td>The learner has an active role to reproduce exactly the learning materials provided by the teacher.</td>
</tr>
<tr>
<td>C: Applying acquired facts, procedures or skills</td>
<td>The learner retains and utilizes acquired skills when the need arises.</td>
</tr>
<tr>
<td>D: Understanding</td>
<td>Learning is a process of making sense of things, of relating parts of the subject matter to each other and to the real world.</td>
</tr>
<tr>
<td>E: Seeing things in a different way</td>
<td>Learning becomes personal as it changes the way a person thinks about something.</td>
</tr>
<tr>
<td>F: Changing as a person</td>
<td>The development of new ways of seeing the world as the learner change in view of what has been learned.</td>
</tr>
</tbody>
</table>

*Adapted from Saljo, 1979 and Marton, Dall’Alba & Beaty (1993)*

The learning conception literature promotes that each higher order conception subsumes all conceptions below it. These conceptions to learning can be divided into two: the first three (commonly referred to as *reproductive*), sees learning as the end result – a product; while the last three (also known as transformative) perceives learning as a means to end, not an end in itself – it is a continuing process. Conceptions 1 to 3 perceive learning as something external to the learner and is understood to be something that just happens or is done to the student by the teachers. Conceptions 4 to 6, however, emphasise the internal or personal aspect of learning. Learning is seen as something that the person does in order to understand the world (Gibbs, 1982; Ramsden, 1992; McLean, 2001).
3.0 BACKGROUND AND METHODS USED

3.1 Background to the Study

With more than ten years of teaching Accounting subjects in the tertiary level, I have used different ways of presenting lecture materials and assessment methods. It has always fascinated me how different students approach their learning in different ways. I have come across students who seem to understand the concepts and principles introduced in the subjects and relate them to their everyday life yet not all of them did very well in their overall assessment. Who among those students have really ‘learned’ is a bit of a mystery to me because once the semester is over, I seldom have contact with my previous students. This is because most of the subjects I taught were in the final year. Also, in those ten years of teaching, I have moved from one country to another (Malaysia, New Zealand and now Australia) as well as different institutions.

However, at the time this study was conducted, the situation was different. I had recently accepted a teaching appointment in a small regional campus of an Australian University. Accounting students comprised the majority of the enrolment. In my first year of teaching, I convened and taught Management Accounting and Financial Accounting subjects. These subjects provided for continuity from the first semester to the second semester for Management Accounting (MA2A & MA2B - both second year subjects) and from second year to third year for Financial Accounting (FA2 & FA3). Table 2 shows relevant information on my teaching load in the first year of my appointment.

<table>
<thead>
<tr>
<th>SEM</th>
<th>SUBJECT</th>
<th>CODE</th>
<th>YEAR</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Management Accounting A</td>
<td>MA 2A</td>
<td>2nd year</td>
</tr>
<tr>
<td></td>
<td>Financial Accounting 2</td>
<td>FA 2</td>
<td>2nd year</td>
</tr>
<tr>
<td>2</td>
<td>Management Accounting B</td>
<td>MA 2B</td>
<td>2nd year</td>
</tr>
<tr>
<td></td>
<td>Financial Accounting 3</td>
<td>FA3</td>
<td>3rd year</td>
</tr>
</tbody>
</table>

Being a small campus with small classes, it was really easy to know all the students by name and to monitor their assessment performance. This situation provided me the opportunity to probe deeper, by way of a case study, how students with certain characteristics perceive their
learning process and how the learning approach adopted in their previous semester's accounting subjects help or hinder their learning in the subsequent semester.

It was interesting that in the first semester, half of my students in FA2 were also in MA2A. In the second semester, nearly half of my MA2A students continued with MA2B (this is because MA2B is only required for students majoring in Accounting). As FA3 is a third year subject and most of my students are in their second year, most FA2 students deferred enrolling FA3 until the following year. This is why in this study, Management Accounting students were chosen for the interviews as described next.

3.2 Method Used: Interviews and Case Study

This research was undertaken as a pilot study with the aim of preparing for a larger study in the future. Three Management Accounting (MA2B) students in the second semester were interviewed for about thirty-five minutes each. The three students were chosen to represent the different levels of overall marks achieved from the first semester Management Accounting subject (MA2A). Being an exploratory study, each student is taken as a case study. Each student is given pseudo names to maintain confidentiality. Described below are the characteristics of the three respondents:

Alfred – achieved High Distinction; young student, working part-time; studying full time
Bradley – achieved Credit; mature student; working full time; studying part-time
Carla – achieved Pass; young student; working part-time; studying full-time

While students may, by nature, approach their learning in different ways, certain factors may influence the approach they are most likely to adopt. By way of open-ended questions during the interview, students were asked to describe the way they study for the subject and why. They were also asked to think of the likely factors affecting the way they develop their study habits.

4.0 RESULTS AND DISCUSSION

Tables 3 & 4 show the summarised result of the interviews with the three Accounting students. Table 3 shows the relationship between the student’s conceptions of learning and
the approach they have each adopted. Table 4 shows the factors which have affected each student’s approach to learning. These are further discussed in the case studies that follow.

Table 3: Learning Conception and Approach Matrix

<table>
<thead>
<tr>
<th>Conception of Learning</th>
<th>Approach to Learning</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Surface</td>
</tr>
<tr>
<td>A Increase in knowledge</td>
<td></td>
</tr>
<tr>
<td>B Memorising</td>
<td></td>
</tr>
<tr>
<td>C Applying</td>
<td>Carla***</td>
</tr>
<tr>
<td>D Understanding</td>
<td>Alfred*</td>
</tr>
<tr>
<td>E Seeing things differently</td>
<td></td>
</tr>
<tr>
<td>F Changing as a person</td>
<td>Bradley**</td>
</tr>
</tbody>
</table>

*Alfred – achieved High Distinction; young student, working part-time; studying full-time
**Bradley – achieved Credit; mature student; working full time; studying part-time
***Carla – achieved Pass; young student; working part-time; studying full-time

4.1 Case 1: Carla

Carla is one of the quietest students in my class. She is a full-time student who works part-time (two days a week). She seldom participates in class discussions but she is always present and she listens attentively during lectures. In the first semester, she was enrolled for both FA2 and MA2A. Both subjects require 2 hours of lecture and 1 hour of tutorial each week (for 13 weeks in a semester).

Initially, I asked her to describe how she studies for Accounting. She said that she goes through the lecture materials and the chapter discussed during the lecture. She finds the lecture helpful in introducing the concepts and ideas. Tutorials are useful in another way because it requires her to apply the concepts introduced during the lectures. A follow up question was asked as to how she prepares for lectures and tutorials. She explained that in the first few weeks, she tried to read the book before coming to lectures but because of poor time organisation, she has not continued to do so. However, she finds that she understands the lectures better when she has done her reading beforehand. For tutorial sessions, she tries to answer the tutorial questions before coming to class. She does this by reviewing the lecture notes and the relevant chapter from the textbook.

When asked as to what does she actually mean when she says that she understands the concepts or principles introduced in lectures and tutorials, she replied:
“...when I can apply it to answer the tutorial questions... once I have developed the skills to do it repetitively ... so that I can easily do the questions and get the formulas from the top of my head... memorising formulas is not enough, you've got to be able to know how to apply it in problem solving situation.”

Carla also mentioned that the Accounting subjects are relevant both to her career as well as ‘everyday life’. She explained:

“Probably, FA2 is more relevant for my career because I would like to be a Chartered Accountant more than a Management Accountant. Management Accounting is more relevant to ‘everyday life’... for example, I have learned the use of terms like ‘sunk cost’ in making everyday decisions.”

Based from the above responses, it is clear that Carla’s conception of learning is moving towards Conception C - applying. While she is intending to apply the acquired facts, skills and concepts to problem solving situations, her concept of learning has not passed the stage of learning as a continuing process. She feels that once she is able to get the formulas (for example) ‘at the top of her head’ and once she has mastered the skills of solving the problem, then she has ‘arrived’, i.e. reached the end of the line.

As to how Carla approaches her learning, it appears that she is more of a ‘surface’ learner. She feels that she need to accumulate the facts, skills and concepts at the top of her head. However, as she explained quite vividly how she is able to use some of the concepts learned from the subject in her everyday decision making, this implies that she is attempting to internalize the things she has learned. Because of this, I feel that while she is generally adopting a surface approach to learning, she is also showing certain characteristics of deep learning.

The matrix in Table 3, therefore puts her at learning conception C and somewhere in between learning approach ‘surface’ and ‘surface-deep’. As Carla’s learning has not gone past the ‘reproductive’ level both as to learning conception and approach, it suggests that her academic result (being a mere Pass) seems to agree with her learning process.
An analysis of the interview transcripts showed that the factors which contribute to Carla’s deep learning (as shown in Table 4) includes: perceived relevance of the accounting subjects in her career and in her ‘everyday life’. On the other hand, other factors associated to Carla’s surface learning are: time constraint because of poor organisation, work commitment and the assessment structure. She finds that because the final examination constitutes 70% of the overall mark, she tends to spend a lot of time preparing for the exams but not learning so much from it. She finds the assignments more useful in making her understand the concepts deeply. The tutorials are also useful but because there is no mark allocated for doing the tutorials questions, she finds no incentive to spend time doing them before attending the class.

Table 4: Factors Associated with Learning Approach

<table>
<thead>
<tr>
<th>Factors associated with Learning Approach</th>
<th>Surface Approach</th>
<th>Deep Approach</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Carla</strong></td>
<td>Time constraint</td>
<td>Perceived relevance to career</td>
</tr>
<tr>
<td></td>
<td>Poor organisation</td>
<td>Perceived relevance to ‘everyday life’</td>
</tr>
<tr>
<td></td>
<td>Work commitment</td>
<td>Bradley</td>
</tr>
<tr>
<td></td>
<td>Assessment structure</td>
<td>Previous experience/Habit</td>
</tr>
<tr>
<td><strong>Bradley</strong></td>
<td>Time constraint</td>
<td>Personal commitment to improve</td>
</tr>
<tr>
<td></td>
<td>Work commitment</td>
<td>Alfred</td>
</tr>
<tr>
<td></td>
<td>Family commitment</td>
<td>Perceived relevance to career and work</td>
</tr>
<tr>
<td></td>
<td>Assessment structure</td>
<td>Peer, group pressure</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Pressure to achieve good grades</td>
</tr>
<tr>
<td><strong>Alfred</strong></td>
<td>Time constraint</td>
<td>Alfred</td>
</tr>
<tr>
<td></td>
<td>Poor organisation / Lack of discipline</td>
<td>Perceived relevance to career and work</td>
</tr>
<tr>
<td></td>
<td>Previous experience/ Habit</td>
<td>Peer, group pressure</td>
</tr>
<tr>
<td></td>
<td>Assessment structure</td>
<td>Pressure to achieve good grades</td>
</tr>
</tbody>
</table>

4.2 Case 2: Bradley

Bradley is a mature student and a family man. He participates actively during class discussions and asks relevant and pertinent questions. He is a part-time student who works full time in the transportation industry. Despite his hectic schedule, he seldom misses his class and always attempts to answer some of the tutorial questions before coming to class. He admits that he has only done his reading before attending the lectures about 50/50 (half of the time) because of time constraints and work and family commitments. Bradley shows enthusiasm in understanding the concepts and principles introduced in the subject.
During the interview, I gave him the following metaphor and asked him to comment. Consider yourself as an empty bottle and knowledge as something which is like liquid. Do you perceive learning as the process of filling the empty bottle with the liquid? His response:

“Well if that is the case, you could easily tip over the bottle and it will be empty again, isn’t it? With learning, you can not empty that bottle. Once you have learned something, you are changed ... you can not unlearn something which you have learned before.”

I find that Bradley’s concept of learning is something which has certainly reached the transformative aspect of learning. He sees learning as something which happens to him, not something which is done to him by someone — learning is a personal thing. He uses it to make sense of the world around him. He sees himself as a changed person because of what he has learned. As such, I consider him to have achieved level F conception of learning.

While talking casually after the interview, he told me that he doesn’t find the subject very much relevant to his career being in the transportation industry. He said he enrolled for the subject to be able to acquire the ‘tools’ necessary to make the right business decisions for personal development. As such, he tries to relate each topic learned to his previous experiences and attempts to look for patterns on how he could adapt it to various circumstances. Hence, it was clear that Bradley displays the characteristics of a ‘deep’ learner.

What concerns me, however, is despite the fact the Bradley showed strong signs of being a transformative learner, he did not get as high academic results as Alfred did in the first semester Management Accounting subject. He mentioned during the interview that he feels that the assessment structure in the subject is not the best. He did not favour having a big chunk of the overall mark allocated for the final examination which encourages rote learning formulas to solve problems. Like Carla, he believes that the assignment helped him learn more than the final examination.

The factors which influenced Bradley’s learning are shown in Table 4. Despite the time constraint and the heavy work and family commitment, Bradley’s personal habit and past
experiences and his personal commitment to improve influenced his ‘deep’ learning immensely.

4.3 Case 3: Alfred

Alfred is a full time student who works part-time in his uncle’s business doing general accounting and tax reports. He participates well in class discussions but tends to drift away during lectures. He admits that he doesn’t put much preparation during lectures and tutorials saying:

“I tend to muck around during lectures … I listen enough get the more important points but after a while, I tend to drift away. If there is something I find interesting in the lecture, I will discuss it with my seat mate and when we don’t agree on something, I will listen again just to prove who is right and who is wrong.”

With tutorials, he attempts to answer the tutorial questions usually before coming to class. He calls himself a “browse-through” reader, that is, he skims through the chapter enough to answer the questions for the tutorials.

He claims that he has improved a lot on the way he approached his learning compared with the early years (from secondary school up to first year in university). He explains that, before, he didn’t really spend much time studying during the semester but he ‘fast-tracked’ his learning as he prepares for the final examination. Now, he spends some time preparing for tutorials during the semester. However, he still maintained his habit of getting more serious with his studies just before the final examination. Alfred, like Carla and Bradley, prefers to have a higher percentage allocated to other assessment materials like assignments because he feels that he learns a lot more preparing the assignments than the exams. However, Alfred believes that the examinations separate those who understand and those who don’t. When asked as to how he prepares for the exams, he said:

“I start [studying] from 8:30 in the morning until 9 o’clock at night. I do that for a few days.”
I asked him if he does this in all his subjects and his response was positive. He even mentioned that in one subject, he did not do much studying at all during the semester. He spent three consecutive days preparing for the finals and he got a very good mark in the end. Alfred claims that his tendency to ‘fast track’ his learning ‘pays’ because he usually gets good grades. When I ask him as to how the retention rate was of the concepts learned via ‘fast track’, he said:

“If someone asked me about that [topic] and give me a bit of background, I can still explain it but it may be not as good as the way I answer it in the exam.”

I was fascinated by Alfred’s confessions on the way he learns and his conception of learning. My initial impression is that he is definitely adopting a surface approach to learning but he understands (level D conception) enough to be able to apply the concepts he has learned. Although he does not read much or get really serious with his studies during the semester, Alfred admits that he has the habit of discussing concepts, problems and exercises with his friend. He and his friend developed a friendly competition as to who is right/wrong, who gets a better mark and who can beat each other. Because Alfred is extremely competitive in nature, he does not want to be beaten. As such he is compelled to learn more than this friend.

Also, the fact that he is employed part-time doing some Accounting work helped him to make an effort not only to apply acquired skills to solve classroom problems but also to understand and apply the concepts to real world problems. And because he feels that the Accounting subject is relevant to his future career, it motivates him to understand the concepts better.

These factors, I find, are what contributes to Alfred’s ‘deep’ learning. Alfred’s case lead me to believe that while he uses ‘surface’ approach to learning, perhaps intentionally or unintentionally, he understands the concepts and principles deeply as he applies what he has learned at work and as he discussed with his friend what he has learned in the subject.

4.4 Reflections on Case Study Results and Recommendations for Further Study

Of the three students included in this study, it is evident that Bradley shows a much higher level of understanding of Management Accounting concepts compared with the other two students. As MA2B is a continuation of MA2A from the first semester, relating concepts
previously learned from MA2A helps a lot in understanding the concepts introduced in MA2B. It is clear from the second semester class discussions that Bradley relates the current topics to previous MA2A topics a lot better than the other students. Whilst Alfred achieved the highest mark in MA2A among the three students interviewed, he did not display the highest level of learning conception. The study showed that Carla’s reproductive learning conception and approach is more in line with her academic result of achieving a Pass, but for Bradley and Alfred, their learning conceptions are somewhat inconsistent with their results.

As all three students interviewed felt that the assignment (which is a case study type) helped them learn more than the final examination (which is mainly multiple choice type and problem-solving questions), it may be worth investigating further how the assessment structure may affect the way students’ learning conception and approach may be altered and how it relates to their academic achievement.

Other contextual factors influencing student learning such as the effect of the level of maturity or age of the student as well as the effect of work (including the type of work, i.e. Accounting or Non-Accounting work) and incorporating group discussions in the assessment structure are also worth investigating further.

5.0 CONCLUSION

The findings of this exploratory study seem to suggest that the way students approach and perceive their learning experience may not always be consistent with their overall mark. Alfred, who achieved High Distinction, may have reached learning conception level D – understanding (just one level past the reproductive aspect of learning) but he still predominantly displays ‘surface’ learning characteristics. Despite this, Alfred’s inclination to take control of his learning process partly because of work requirement and peer pressure helped him to learn deeply.

Bradley, on the other hand, appear to display ‘deep’ learning and have reached learning conception level F – changing as a person but only got a Credit in the first semester Management Accounting subject. Whilst it is possible that other contextual factors such as Bradley’s level of maturity and full time work commitment may have affected his overall
mark, this study’s initial findings point to some of these perceived factors affecting students’ learning.

Some of the factors identified by the respondents associated with ‘surface’ learning are time constraint, poor organisation, work and family commitment and the assessment structure. It appears that putting too much emphasis on the end of semester examination encourages students to defer learning until the assessment is fast approaching. On the other hand, the factors associated with ‘deep’ learning are: personal habit and/or previous experience, personal commitment to improve, perceived relevance to career, peer pressure and pressure to achieve good grades.

The findings in this study, while exploratory, provide some empirical support to studies calling for consideration of students’ learning behaviour in conjunction with the possible change in curriculum or assessments structure in accounting education (e.g. Sharma, 1997; Gow, Kember & Cooper, 1994).

REFERENCES


