Predictions of Performance Compared to Actual: A Hard Lesson for First-Year Accounting Students

Audra Ong
University of Windsor

Peter Savoni
University of Windsor

The importance of students' own assessment of their performance remains a neglected area and is worthy of further study. This paper focuses on students in the first six weeks of a Year 1 introductory financial accounting course and their predictions of grades they would achieve in their mid-term examinations. A questionnaire one week prior to the examinations focused on their studying habits and grade predictions. A second questionnaire after the mid-term examination results revealed that students were overly optimistic in their grade predictions. Their actual results led to a statistically significant increase in time spent studying but not class attendance.

INTRODUCTION

Educators and students are very interested in examination performance. From the educators view it can be considered a measure of their own abilities in conveying knowledge. From the students view, a good grade can be a reward for hard work, a measure of their ability and a stepping-stone towards their final degree.

Given the importance of performance in accounting courses, it is not surprising that there is a rich literature examination all aspects of it. Research in this area is normally organized in five major sections (Apostolou, Dorminey, Hassell, Rebele, 2016). These are:

1. Curriculum and instruction, including assessment practices and assurance of learning.
2. Instruction by content area and section
3. Educational technology.
4. The student perspective of accounting education, including career issues, skills, and approaches to learning.
5. Faculty research, teaching, and other issues.

Essentially, studies are considering the delivery of the material, the nature of the content and the response of the recipients. One robust strand of research concentrates on the students and, importantly, the factors that can affect their performance. Many studies have explored student characteristics that may affect performance. We contribute towards those studies by comparing students' predictions of future examination results against their actual performance and any resulting changes to their study habits.

The next section reviews the relevant literature and this is followed by an explanation of our own preliminary study and the results we have obtained. The final section reflects on the strengths and weaknesses of our study and posits tentative proposals on the further conduct of the study. The key research question embedded in this current research is whether students studying behaviour is influenced by the gap between their predictions of their future examination performance and their actual performance.

LITERATURE REVIEW

Previous studies have considered the effect of the method and nature of teaching adopted by the educators on student performance. These have ranged from the use of learning journals (Daff 2016) and the use of clickers on performance. Chui, Martin, and Pike (2013) reported that students using clickers considered they had more confidence about their grade and spent significantly less time studying than students who did not use clickers. Whether clickers contribute towards better examination performance is uncertain. A comparison of two groups by Eng, Lea, and Cai (2013) showed that:

1. students using clickers performed better on two examinations;
2. students not using clickers performed better on two examinations;
3. both groups performed about the same on two examinations.

Other studies have concentrated on the background or characteristics of students to explain their levels of performance. One aspect of a study by Einig (2013) revealed that prior accounting knowledge and country of origin were also associated with examination performance. This finding was confirmed by Sargent (2013) in a quasi-experimental analysis that examined the association between prerequisite knowledge and student performance. One group had no prerequisite knowledge but another group was given an online prerequisite training/tutoring tool. The results show higher performance in intermediate accounting II for the treatment group, thus suggesting a multiple course effect.

However, caution must be exercised in interpreting these results. A study in the UK (Rowbottom, 2013) examined whether accounting courses taken prior to university entrance were associated with student performance. The results revealed that students with an Accounting A-Level (the examination qualification in the final year of high school) have an initial advantage, which dissipates over time and is associated with lower overall performance at the end of university studies.

Coetzee, Schmulian and Kotze (2014) in a South African study explored accounting students' communication apprehension and its association with culture and language. The analysis reveals significant differences in communication apprehension across culture groups. Communication apprehension was higher for students from poor communities. The study also found that students who received instruction in the business language that was to be used upon graduation showed less communication apprehension, regardless of their home language.

Some studies have included International Financial Reporting Standards and hence the IASB's Conceptual Framework. Janse van Rensburg, Coetzee, and Schmulian (2014) in a South African study evaluated students' reading comprehension of the Conceptual Framework using the Cloze procedure. There was a significantly positive association between the students' Cloze reading comprehension scores and the language of instruction. Students who had attended a prior reading course also received significantly higher Cloze scores. The conclusion was that language and reading comprehensive instruction affected learning

One study relevant to our investigations was conducted by Scully and Kerr (2014). They surveyed students about their study times and perceptions of workload in undergraduate and graduate accounting courses at a large Australian public university. The results suggested a mismatch between hours students spent studying and their reported perception of meaningful learning. The findings suggested that the curricula of accounting units might be improved by managing student perceptions and setting expectations of course workload

RESEARCH METHOD

The results discussed in this paper are part of a larger study concerned with the learning behaviours and performance of first-year students on an introductory accounting course. This paper concentrates on the study habits of first-year accounting students, their predictions on their potential grades in future midterm examinations and their actual performance. The study also considers whether the gap between predicted and actual performance led to a change in study habits.

Two short questionnaires were completed by 40 first-year students. The first questionnaire was completed at the end of the first six weeks of the course and two days prior to the mid-term examinations. One week after the mid-term examination results had been announced a shorter follow up questionnaire was completed. This focussed on the studying behaviour of the 40 students. In addition, unstructured discussions were conducted individually with five students.

The questionnaires were anonymous and the students were informed that the questionnaires would be destroyed within one week of collection and no attempt would be made to identify individual students. We emphasise that the responses from students are their own estimation of their studying habits.

For this study, no hypotheses were constructed for the surveys but statistical testing was conducted to identify any potential fields worthy of further study. We discuss those findings where a chi square test demonstrated significant differences.

FINDINGS

Level of Difficulty

Little prior attention has been paid in the research to the level of difficulty the students claim they are experiencing in their studies. One might anticipate that if students experienced little difficulty then this would impact on the amount of time they spent studying and the number of lectures they attended. Conversely, students who found introductory accounting difficult would have different studying habits.

One question asked students the level of difficulty they experienced with the different topics that had been covered in the accounting course. In designing the questionnaire, we allowed students to express "no opinion" as we accepted that after only 6 weeks of the course opinions may not have been fully formed. The results are shown in the following table.

TABLE 1
LEVEL OF DIFFICULTY WITH TOPICS

Topic	Difficult		No opinion		Easy	
	Number	%	Number	%	Number	%
The elements of the four financial statements	8	20.0	5	12.5	27	67.5
The relationship of the four financial statements	9	22.5	8	20.0	23	57.5
The accounting information system	15	37.5	13	32.5	12	30.0
Accrual accounting	18	45.0	4	10.0	18	45.0
Internal control and cash	19	47.5	3	7.5	18	45.0
Revenue recognition	18	45.0	5	12.5	17	42.5
Matching concept	16	40.0	8	20.0	16	40.0
Cost of goods	13	32.5	4	10.0	23	57.5
Inventory valuations	15	37.5	13	32.5	12	30.0

We held no preconceptions on the possible responses, although most accounting lecturers would identify the main concepts of cash, accruals, revenue recognition and matching as major hurdles. Unfortunately, unless these concepts are understood fully in the first year, students will make little progress in Year 2. Interestingly, an almost identical number of students found these concepts easy to understand.

Although we conducted a statistical analysis to determine whether students claiming prior accounting knowledge found the topics easy, there was no significant correlation. Given the relatively small size of the sample, we would hesitate to draw any firm conclusions from these results. The prior studies we referred to earlier gave differing results and a study that carefully measured students' prior knowledge is required for a definitive answer.

Given the difficulties students identified, the question arises as to where they turn to for advice. The responses are shown on the following table.

TABLE 2
SOURCES OF ADVICE

	Number	Percent
Google	21	52.5
Friends and relatives	2	5.0
Professor	5	12.5
Textbook	7	17.5
YouTube	5	12.5
Total	40	100.0

It may be disappointing to lecturers that they rank only third equal with YouTube and far behind Google as a source of support. In discussions with students, they claimed that the advantages of Google were immediate accessibility and a potential range of explanations on a particular topic. An issue that arises from these findings that we do not explore is the use of Google on University courses.

Studying Behaviour and Performance

A central core of the present study was the studying behaviour of students. We measured this in two ways. First was based on hours studying accounting each week and the second was the number of classes attended. The results are shown below and we would emphasise that these are based on students' self-assessment.

One question asked student to state the number of hours they spent each week studying Financial Accounting (excluding lecture hours). The results are shown in Table 3 below.

TABLE 3
NUMBER OF HOURS SPENT STUDYING EACH WEEK

	Number	Percent
5 hours or more	8	20.0
3-4 hours	14	35.0
2 hours or less	18	45.0
Total	40	100.0

Almost half of the students responded that they spent 2 hours or less studying. A closer examination of these results revealed that a few students claimed to spend less than one hour. A second question relevant to studying behaviour asked students how many classes they attended approximately in the first six weeks of the semester. The results are shown in the table below.

TABLE 4
NUMBER OF CLASSES ATTENDED

	Number	Percent
All	15	37.5
Most	16	40.0
Half or less	9	22.5
Total	40	100.0

We expect that the above results would not be far different to the experiences of some of our colleagues. Additionally, the lecturers on this course has a high ranking in student teaching evaluation. There seems to be a general opinion that class attendance has been declining over recent years. One reason that has been voiced is that many students now must take part-time work because of financial obligations.

Further research to determine whether there is a decline in class attendance and the possible reasons would be useful. The findings from this survey on the popularity of Google and YouTube may offer an explanation.

We accept that time spent on studying and class attendance is not, by itself, necessarily reflected in examination performance. However, without significant feedback, students may consider that the amount of work they do is sufficient to obtain a good grade.

The University in this survey has a grading system of A to F with each letter represents a percentage range. For example, Grade A range is as follows:

A+ 90-100%
A 85- 89.9%
A- 80-84.9%

An important factor in the grading assessment is the University's policy on the "curving" of grades. For first-year courses, the prescribed mean for students' course grades must fall between 60% and 72.9%. The instructor has the right to adjust and curve the final marks as necessary in order to conform to the university's prescribed average.

Grade B starts at 70% (B-) and the top range is 79.9% (B+). It is evident that the prescribed mean, under University policy, must fall between 60% - 72.9%. Table 5 shows the grade that the students expected or hoped to obtain in the mid-term examination. These results indicate that the application of the University's policy would bring about some disappointment.

TABLE 5
EXPECTED PERFORMANCE IN MID-TERM EXAMINATION

Grade	Expected performance	
	Number	Percent
A	11	27.5
B	27	67.5
C	2	5.0
D	-	-
	40	100

The next table shows the actual grade students achieved compared to the expected grade.

TABLE 6
EXPECTED AND ACTUAL PERFORMANCE AT MID-TERM EXAMINATION

Grade	Expected performance		Actual performance	
	Number	%	Number	%
A	11	27.5	5	12.5
B	27	67.5	22	55.0
C	2	5.0	9	22.5
D	-	-	3	7.5
F	-	-	1	2.5
	40	100	40	100

Even allowing for some optimism, there is a substantial gap between expectations and actual performance. This raises the important question as to whether students change their studying habits if they have information that demonstrates their performance is lower than that they predicted.

The following table shows the adjustment the students claim to have made to their studying hours. It shows their reported house spent on studying before the midterm examination and their reported hours spent studying after the mid-term examination. In the following table, we show the complete range of hours that were on the questionnaire.

TABLE 7
ADJUSTMENT TO STUDYING HOURS

	Prior studying hours		Current studying hours	
	Number	Percent	Number	Percent
7 hours or more	1	2.5	1	2.5
5-6 hours	7	17.5	7	5.6
3-4 hours	14	35.0	21	52.0
1-2 hours	13	32.5	7	17.5
1 hour or less	5	12.5	4	10.0
Total	40	100.0	40	100.0

There has been little change at the top end and at the bottom of the scale. The big difference is the movement from the 1-2 hour range to the 3-4 hour range. Using the chi square test, this is a significant movement. We are unable to state whether this is a permanent movement or an immediate but temporary response to their performance in the mid term. As far as class attendance was concerned, there were no statistically significant differences in class differences before and after the mid-term exams.

The above table demonstrates that some students claim to have changed their studying behaviour after the mid-term exam results. This leads to the question whether the feedback from the mid-term exam may have influenced their perceptions of the performance in the final examinations. The following table shows their expectations in the mid-term exams, their actual performance and their expectations of their performance in the final examinations.

TABLE 8
PERCEPTIONS OF AND ACTUAL PERFORMANCE IN EXAMINATIONS

Grade	Expected performance in mid-term exam		Actual performance in mid term exam		Expected performance in final examination	
	No	%	No	%	No	%
A	11	27.5	5	12.5	12	30.0
B	27	67.5	22	55.0	18	45.0
C	2	5.0	9	22.5	9	22.5
D	-	-	3	7.5	1	2.5
F	-	-	1	2.5		
	40	100	40	100	40	100

There are shifts that are interesting. The number of students expecting to obtain a grade in the A range remains high. Due to curving of marks under university regulations, this is not possible unless a large number of students also fail. None anticipate doing so. Some students expecting to obtain a B grade in the mid-term exam seemed to have adjusted to a C Grade.

CONCLUSIONS

This focus study addresses the link between students' predictions of the grades they will obtain, their actual grades and their study habits. The relative small sample size of 40 students is insufficient for rigorous statistical analysis. In addition, the students had only been studying accounting for six weeks, although one third had some previous instruction. However, the initial findings of this research present an interesting insight into students studying habits and their changing perceptions of their expected performance in examinations.

The hours that students spend studying vary considerably and future research should relate this to both to any previous studies of accounting and the level of difficulty students' experience with the topics that have been addressed in the first six weeks of the semester. The finding that some lecturers may find disappointing is that students having difficulty are far more likely to refer to Google than the lecturer for an explanation.

The hours spent studying and the attendance at class very considerably. Future studies could investigate a possible relationship between the characteristics and attributes of the students and their studying behaviour, although familiarity with the course language has been identified.

Given the studying behaviour of the students and the University regulations on grading, many students seem overly optimistic of their potential performance in the midterm examinations. It is likely that the feedback from the midterm examinations prompted many students to revise their expectations of their achievements in the future final examinations and their studying habits. There was a significant increase in the number of students studying 3-4 hours per week from 1-2 hours per week.

It is difficult to conclude whether this change in time spent studying is a temporary phenomenon. The findings reveal that a number of students are overly optimistic of the achievement that they will have in the final examination. However, the evidence from this research is that student's perceptions and studying behaviour are shaped by feedback. In this case, the feedback is through examination performance. It is open to further research to determine whether regular feedback, for example by weekly tests, have the same effect if it is not linked to the student's final grade at the end of the course.

REFERENCES

Apostolou B., Dorminey, J., Hassell J. & Rebele, J. (2016). Accounting education literature review (2015), *Journal of Accounting Education*, 35, 20-55.

Chui, L., Martin, K. & Pike, B. (2013). A quasi-experimental assessment of interactive student response systems on student confidence, effort, and course performance. *Journal of Accounting Education*, *31,* (1), 17-30.

Daff, L. (2013). Accounting students' reflections on a course to enhance their interpersonal skills. *Accounting Education: An International Journal*, *22,* (6), 563-581.

Einig, S. (2013). Supporting students' learning: The use of formative online assessments. *Accounting Education: An International Journal*, *22,* (5), 425-444.

Eng, L. L., Lea, B.R. & Cai, R. (2013). Use of clickers for assurance of learning in introductory financial accounting. *Advances in Accounting Education*, *14*, 269-291.

Janse van Rensburg, C., Coetzee, S. A., & Schmulian, A. (2014). South African financial reporting students' reading comprehension of the IASB conceptual framework. *Journal of Accounting Education*, *32,* (4), 1-15.

Kidwell, L. A., Fisher, D. G., Braun, R. L. & Swanson, D. L. (2013). Developing learning objectives for accounting ethics using Bloom's taxonomy. *Accounting Education: An International Journal*, *22,* (1), 44-65.

Rowbottom, N. (2013). A-level subject choice, systematic bias and university performance in the UK: The case of accounting. *Accounting Education: An International Journal*, *22,* (3), 248-267.

Sargent, C. S. (2013). Find it, fix it, and thrive: The impact of insisting on proficiency in prerequisite knowledge in intermediate accounting. *Issues in Accounting Education*, *28,* (3), 581-597.

Scully, G. & Kerr, R. (2014). Student workload and assessment: Strategies to manage expectations and inform curriculum development. *Accounting Education: An International Journal*, *23,* (5), 443-466.