
Report on the

ACCY 111 EXPERIENCE

Teaching and Learning Research Project 2010

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1. Introduction

This document reports to the VUW Teaching and Learning Committee on the outcomes to date of the authors' investigation into students' experiences of their study of ACCY 111 Accounting, the BCA core accounting paper offered by the School of Accounting & Commercial Law.

The study was funded by a VUW Teaching and Learning grant of \$20,000, receipt of which the authors gratefully acknowledge. A budget was submitted requesting a grant of \$24,561, being the funds required to undertake the complete study properly. Since the grant actually paid was pared back to \$20,000, it was not possible to complete all of the analytical work intended. Consequently, a full analysis of all of the data collected has not been undertaken, and will not be undertaken until further adequate funding is obtained by the researchers. The outcomes described in this report need to be read in that context.

We acknowledge the assistance of Dalice A. Sim, Statistical Consultant, School of Mathematics, Statistics and Operations Research, VUW, and Andrew Harrison, Research Assistant, School of Accounting & Commercial Law, for collection and analysis of the data used in the study, and Mr Sam Holdem and Ms Jemma Simeon for undertaking the interviews described in our qualitative study below.

2. Background

The pass rate in ACCY 111 has consistently remained relatively low over many years, despite various recent interventions, including:

- More tutorials
- Specialised tutorials
- Introduction of on-line tests
- Variety of teaching staff
- Variety of assessment schemes.

The number of students enrolled in ACCY 111 from 1996 to 2010 was 18,799. 6,249 or 33.2% of them failed the course. Translated to dollars, ACCY 111 generated approximately \$33 million in revenue of which approximately \$11 million related to the students that failed.¹

We are concerned about the societal waste that arises from the high proportion of failures. That waste is financial in terms of students' personally funded expenditure in connection with studying the course, student debt burdens and opportunity costs, and government expenditure. It is also personal, in terms of students' (and VUW staff) time and students' self esteem.

The authors, who have been involved in the delivery of ACCY 111 for a number of years, are looking to make changes to the structure of the course to increase the pass rate, but need to be informed about the causes of the prevailing problem.

¹ Based on a 15-point course at 2011 rates.

3. Methodology

The project comprised two broad facets, a quantitative study and a largely qualitative study:

- 1) **Quantitative study:** a statistical analysis of data relating to the **2009** cohort of ACCY 111 students across all offerings in the three trimesters to ascertain:
 - a) demographic factors and pre-university qualifications that impacted upon the performances in ACCY 111 of various student subgroups; and
 - b) how in-course activities impacted upon those students' final grades for the course; and

- 2) **Qualitative study:** structured interviews of samples of students who studied ACCY 111 during the second trimester of **2010** to ascertain their attitude toward, and commitment to, the course as they progressed through it. A control group was also interviewed at the beginning and at the end of the course. Unfortunately, the inadequate funding, referred to above, prevented a reliable, detailed statistical analysis of the student responses to this facet of the project.

4. Quantitative Study

In relation to part (a) of the project, viz. analysis of the data concerning the 2009 cohort, we observed that 1,238 students attempted ACCY111 at least once in 2009, and, of these, 39.6% failed at least once in 2009. For the 1,003 students whose 2009 attempt was their first-ever attempt, 356 (35.5%) failed on that attempt. We wanted to understand which subgroups of students had a higher risk of failing so that remedial action might be taken and the overall course pass rate could increase.

Data were provided on all 1,323 2009 attempts by the 1,238 students. The data consisted of background demographic information, secondary school performance information, information on tutorial attendance, course work performance during a student's relevant trimester of study, and the student's final grade ("Achieved Grade").

In 2009, students were taught under five different CRNs across three trimesters. The methods of teaching, e.g. the number and use of tutorials, use of the online learning tool *My Accounting Lab* ("MAL"), etc., differed from trimester to trimester, as did the lecturers. When we used the data from all three trimesters, we derived variables that measured approximately the same thing for each student, regardless of the trimester in which the student was enrolled.

We investigated the relationship between student performance and their Achieved Grade in ACCY111 within three student cohorts in 2009:

- 1) The first cohort of students consisted of ***all the first attempts in 2009***, i.e. if a student attempted ACCY111 more than once in 2009, only their first 2009 attempt was included in this analysis. There were 1,238 students with at least one attempt at ACCY111 in 2009. Within this cohort, however, several students had already attempted ACCY111 prior to 2009.
- 2) We therefore examined a second cohort of 1,003 students whose ***first attempt ever*** at ACCY111 was in 2009.
- 3) We also considered a third cohort of 84 students who made ***at least two attempts*** at ACCY111 during 2009. Since we had full data on both attempts, we could compare student performance during the course and its effect on the change in Achieved Grade.

4.1 Results

Particular insights from our analysis are set out below in respect of two categories of independent variables:

- 1) “Pre-Victoria” variables, which examined the relationship between students’ Achieved Grades in ACCY 111 in 2009 and relevant student attributes **at the time that they commenced** the course; and
- 2) “Victoria” variables, which examined the relationship between students’ Achieved Grades in ACCY 111 in 2009 and how students were performing **during** the delivery of the course.

For both cohorts, the final model included NCEA variables plus Terms Test score, percent of tutorials attended, and MAL² Score. These variables were able to explain 72-73% of the variability in Achieved Grade in these students. For both the first and second cohorts, all the variables measuring performance during the course (“Victoria” variables) explained 67.2% of the variability in Achieved Grade in the first cohort, and 62.9% of the variability in the second cohort.

While the second cohort had higher performance on average than the first cohort, the median Achieved Grade for the second cohort being C+, cf. C for the first cohort, for both cohorts similar results were apparent for both the Pre-Victoria variables and the Victoria variables. Among the variables measuring performance prior to entry to VUW, NCEA performance was clearly the most important.

² MAL refers to the online revision and assignment system “MyAccountingLab” provided by textbook publisher Pearson. In 2009 a small portion of the final grade for ACCY 111 came from assignments completed online using MyAccountingLab.

4.2 Cohort 1 – All First Attempts in 2009

The final model in our stepwise linear regression analysis was:

Coefficients^a

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	95.0% Confidence Interval for B	
	B	Std. Error	Beta			Lower Bound	Upper Bound
(Constant)	-3.965	.237		-16.729	.000	-4.431	-3.500
NCEAelig	-.703	.138	-.112	-5.085	.000	-.974	-.432
NCEA Overall Exc	.034	.005	.153	7.187	.000	.025	.043
NCEA Overall Merit	.021	.005	.113	4.509	.000	.012	.030
NCEA Accy Achv	.024	.010	.045	2.454	.014	.005	.043
Terms_Test0	.090	.004	.592	25.580	.000	.083	.097
TutAttend	.022	.003	.167	8.303	.000	.017	.027
MALScore	.016	.002	.175	7.289	.000	.012	.021
Trim1	.994	.183	.169	5.419	.000	.634	1.354
Trim2	-.603	.162	-.098	-3.730	.000	-.920	-.286

a. Dependent Variable: Achieved Grade

This model had an Adjusted R² value of 0.726, meaning that the variables in the first column of the above table explain 72.6% of the variability in Achieved Grade.

4.2.1 Pre-Victoria variables

- 1) *NCEA Preparation*: As we expected, as the number of credits in various NCEA categories increases, a student's Achieved Grade increases. However, surprisingly those students who were "NCEA Eligible"³ had a lower Achieved Grade on average than those who did not have NCEA, all other things being equal. We observed that there are some international students, who are not "NCEA eligible", and performed quite well in ACCY 111. Even though other aspects of pre-University life (choice of major, admission type, ethnicity) were valuable when Pre-Victoria variables were considered on their own, once course performance was factored in, they no longer aided significantly in predicting Achieved Grade.
- 2) *NCEA Quality of Performance*: Just having NCEA preparation was not enough, however. It is clear that a good performance on NCEA is necessary before NCEA preparation is reflected in improved grades. Students with at least 21 Excellence credits, or 34 Merit credits; or 28 Achievement credits in Accounting (or some other combination of Excellent, Merit and Achievement credits which is equivalent to the above combination) would obtain a higher Achieved Grade. (These figures do not make allowance for any other NCEA credits they may have.)
- 3) *Chosen Major in 2009*: Those students majoring in Accounting and/or Economics have significantly higher predicted Achieved Grades than other students. Accounting major students are predicted to have a larger increase in Achieved Grades than the Economics students on average, but these differences are not statistically significant.
- 4) *Admission to University*: Students who obtained Non-matriculated, Provisional or Special Entry into university performed worse than students who otherwise matriculated. On average, students who obtained discretionary entry into the course performed significantly better than the others.
- 5) *Ethnicity*: Compared to NZ European/Pakeha (including Australian citizens), all other ethnic groups perform worse, with the poorer performance of the African, Chinese and Other Pacific Peoples groups being statistically significant.
- 6) *Gender*: Females perform significantly better than males.

³ Since we had no information about any student who had attempted NCEA but achieved no credits, a student was recorded as "NCEA Eligible" if he/she had achieved at least one NCEA credit overall.

4.2.2 Victoria variables

- 1) We found that those students who do well in ACCY111 are those who also do well in other subjects, and those who do poorly in ACCY111 also do poorly in other subjects. (While this is interesting information, it is not of great use to us in terms of “predicting” who will do well in the course.)
- 2) *Coursework*: All aspects of the coursework were important in improving a student’s Achieved Grade. Performance in MAL was always important.
- 3) *Mid-trimester Test*: Not unexpectedly, performance in the Mid-trimester Test was the variable most highly predictive of Achieved Grade, with performance in short tutorial tests (two tutorial tests were conducted in Trimester 1 and three in Trimester 3) being the next most predictive.
- 4) *MAL usage*: For any two students who spent the same total time on MAL, the student whose individual session times were longer would be predicted to have the lower Achieved Grade.

4.3 Cohort 2 – First-ever Attempts in 2009

In this cohort, we considered only the 1,003 students who made their *first-ever attempt* at ACCY111 in 2009.

As well as the median Achieved Grade, the means of most of the Pre-Victoria variables were higher than those of Cohort 1; in particular, when we considered all 1,238 students, including the ones who had attempted ACCY111 before 2009, their NCEA credit totals and VUW GPA measures were typically lower than those for the students whose first 2009 attempt is their first-ever attempt. It is thus those students with poorer preparation (NCEA) and poorer performance at University (lower GPAs) who have to attempt the course more than once. This is not unexpected.

4.3.1 Results

The final model in our stepwise linear regression analysis was:

Coefficients^a

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	95.0% Confidence Interval for B	
	B	Std. Error	Beta			Lower Bound	Upper Bound
(Constant)	-3.963	.265		-14.933	.000	-4.484	-3.442
Terms_Test0	.091	.004	.598	23.673	.000	.083	.098
TutAttend	.020	.003	.152	6.880	.000	.014	.026
MALScore	.019	.002	.200	7.628	.000	.014	.024
NCEA Overall Exc	.031	.005	.146	6.293	.000	.021	.041
NCEA Overall Merit	.021	.005	.116	4.291	.000	.011	.031
NCEA Accy Achv	.023	.010	.046	2.275	.023	.003	.044
NCEAelig	-.771	.157	-.118	-4.928	.000	-1.079	-.464
CRN8501	1.232	.230	.175	5.367	.000	.782	1.683
CRN6603	1.157	.221	.175	5.243	.000	.724	1.590
CRN6604	-.374	.223	-.042	-1.676	.094	-.813	.064
CRN6605	-.767	.200	-.107	-3.824	.000	-1.160	-.373

a. Dependent Variable: Achieved Grade

This model has an adjusted R² of 0.732. As for Cohort 1, the highest Adjusted R²'s were for those variables measuring GPA at University, which are not helpful in “predicting” first year performance. The next highest Adjusted R²s are for NCEA performance information, which is a useful predictor.

4.3.2 Pre-Victoria variables

- 1) *NCEA Preparation*: NCEA preparation is important, but again a disadvantage in itself.
- 2) *NCEA Quality of Performance*: The NCEA preparation disadvantage can be overcome if a student achieved at least 25 NCEA Excellence credits, or 37 NCEA Merit credits; or 28 NCEA Achievement credits in Accounting (or some other combination that produces the same overall result).
- 3) *Chosen Major in 2009*: Accounting majors have a significantly higher Achieved Grade than “Other” majors, by approximately 1.3 points, i.e. nearly 1½ grades higher, on average. Economics majors also have a significantly higher Achieved Grade on average, by about 0.8 points, i.e. nearly one grade. There is no statistically significant difference in predicted mean Achieved Grade between Accounting and Economics majors. We therefore conclude that Accounting and Economics majors have a significantly higher Achieved Grade than any of the other majors.
- 4) *Admission to ACCY 111*: Those students admitted via AE, discretionary, or UE criteria are predicted to have a higher Achieved Grade on average than those who gained admission via a VUW entrance qualification, while those who had provisional, special or non-matriculated admission are predicted to have a lower Achieved Grade on average. Only AE and discretionary admission were significantly different. Thus we conclude that those admitted by AE or discretionary means have higher Achieved Grade, on average, than those admitted by other means.
- 5) *Ethnicity*: All ethnic groups were predicted to have a lower Achieved Grade than NZ Europeans/Pakeha (including Australians). This difference is statistically significant for African ethnicity, predicted to average 1.8 points, i.e. nearly 2 grades, lower; for Chinese ethnicity, predicted to average 0.573 points, about ½ a grade, lower, and for Other Pacific Peoples, predicted to average 1.35 points, i.e. nearly 1½ grades, lower.

4.3.3 Victoria variables

- 1) *Mid-trimester Test*: Higher Mid-trimester Test scores are associated with a higher Achieved Grade.
- 2) *Coursework*: All aspects of term work entered our final model – the Mid-trimester Test mark, attendance at tutorials, and MAL performance. This suggests that the more successful students will participate in all aspects of trimester performance.

4.4 *Students with Multiple Attempts at Passing*

For the cohort of 84 students who attempted ACCY111 at least twice in 2009, we measured the relationship between the change in Achieved Grade and changes in Victoria variables.

4.4.1 Results

The table below shows our results. Here, AGdiff is the difference in Achieved Grade and TT0diff is the difference in Mid-trimester Test performance. All differences are calculated as 2nd attempt – 1st attempt.

Variable	Adjusted R2	n	p-value
TT0diff	0.691	84	0.000
TutAttenddiff	0.375	84	0.000
MALScoreddiff	0.146	84	0.000
MEDTIMEdiff	0.151	84	0.000
TTIMEdiff	0.002	84	0.291
TutTestdiff	0.368	28	0.000

From these data, we can conclude that:

- 1) All Victoria variables are positively correlated with AGdiff.
- 2) Again, all aspects of coursework are important to improve the student's grade on a second attempt.

- 3) Mid-trimester Test Difference is, as expected, the most highly correlated with AGdiff.
- 4) The next most highly correlated is Tutorial Attendance Difference.
- 5) For the 28 students who took the course in Trimesters 1 and 3, we had Tutorial Test scores for both attempts, and therefore calculated Tutorial Test Difference. Again there is a significant positive correlation between improvement in Tutorial Test performance and the Achieved Grade.

Mean differences were not significantly different depending upon which trimester a student repeated his/her study of ACCY 111.

We used a multiple stepwise regression to determine which of the continuous difference variables best predicted difference in Achieved Grade. The two variables, Mid-trimester Test Mark Difference (TT0diff) and Difference in Median Time Spent on MAL (MEDTIMEdiff) entered the model, and gave an Adjusted R^2 of 0.713. The model coefficients are:

Coefficients^a

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
1 (Constant)	.096	.201		.478	.634
TT0diff	.084	.007	.783	12.693	.000
MEDTIMEdiff	.029	.011	.166	2.684	.009

a. Dependent Variable: AGdiff

The interpretation of this model is that Mid-trimester Test Mark Difference and Difference in Median Time Spent on MAL are both positively associated with change in Achieved Grade, and together they explain 71.3% of the variability in change in Achieved Grade. One could interpret this model to predict that a change in Mid-trimester Test score of 12 points would improve a repeating student's Achieved Grade by one grade step, on average.

5. Qualitative Study

5.1 *Description*

The second part of our project involved five structured periodic interviews of a sample of 35 students who were studying ACCY 111 during Trimester 2, 2010. These interviews took place in Weeks 1, 2 and 4 of the trimester, the week immediately following the Mid-trimester Test and during the final week of the course.

The 35 students volunteered to be interviewed and were rewarded with free movie passes if they participated in all interviews. Ideally, we sought 50 subjects. Surprisingly, from a total enrolment in the course in Trimester 2, 2010 in the order of 600 students, it was difficult to attract the 35 students who did participate, even with the free movie pass inducement. We suspect that this says something about the benign attitude students generally have about involvement in these types of research activities.

One of the objectives of this component of the project was to determine students' levels of engagement with, and attitudes toward, the course as they progressed through it. Although it is encouraging that 35 students were interested enough to volunteer to participate, the fact that they were volunteers created a problem for us in that our sample could be biased in favour of more engaged (and therefore perhaps better performing) students, whose responses might be tainted by the fact that their activities in, and attitudes towards, ACCY 111 were being monitored by our survey. We therefore also used a control group of 27 students from the course, who answered a questionnaire at the beginning of the course and undertook one personal interview at the end of the course. Each of these students was also rewarded with free movie passes (although fewer than those given to the above 35 regularly surveyed students, since the latter's involvement in the project was more extensive). We compared the responses of the periodically interviewed sample of 35 students with the responses of the control group.

For all surveys and interviews, appropriate approvals were obtained from the FCA Human Ethics Committee prior to conducting the first interview or survey.

5.2 Preliminary Results

Although further analytical work is still required on the information discerned from the student interviews, the following observations can be made:

5.2.1 Time Spent Studying ACCY 111

At the outset of the course, students expected to spend on average 6 hours per week studying ACCY 111. In fact, they spent more than that: 7.7 hours per week on average.

On average, throughout the period of our study students were attending most lectures (1.9 out of 2 hours per week) and tutorials (0.9 out of 1 hour per week). However, from Week 2 to Week 4, there were significant reductions in time spent in preparation for lectures (-16.7%), time spent in preparation for tutorials (-20%), and other time spent on the course (-13.3%). However, by the last week of the course these times had largely reverted to (in the case of tutorial preparation) or exceeded (in the case of other time spent on the course) Week 2 levels.

5.2.2 Time Spent Studying Other Courses

Except for the week of the Mid-trimester Test, students spent more time on other courses than on ACCY 111. Overall, students spent on average 7.9 hours per week on other concurrent courses, cf. 7.7 hours per week on ACCY 111. The difference was particularly marked in Week 4 when the interviewed students spent 61% more time on other courses than on ACCY 111. This may be because other courses are setting assignment work (which counts for final grade assessment purposes) earlier and/or to a greater extent than was done in ACCY 111.

5.2.3 Expected Grade

At the beginning of the course, interviewed students expected to obtain on average a B+ grade. By the week after the Mid-trimester Test, that expectation was revised downwards to a B, many students noting the difficulty of the test. The B expectation was still held at the end of the course (and before the final examination). The aspirations of

the control group were roughly a grade lower: a B expected at the beginning of the course, revised to B/B- after the Mid-trimester Test and at the end of the course.

5.2.4 *Enjoyment of the Course*

As to how much students were enjoying the course, on a Likert scale of 1-5 (1=very little; 5=very much), the average response in Week 2 was 3.4. This was exactly the same average rating that the students gave for enjoyment of the courses that they studied in Trimester 1, 2010. The ACCY 111 rating fell to 3 by the last week of the course. Although the rating remained “positive” (meaning above 2.5), the fall indicates an increasing decline in enjoyment of the course as the students progressed with it. The control group average rating of enjoyment at the end of the course was 2.5.

By comparison with other courses students were studying concurrently, over the whole trimester 40-45% enjoyed other courses more than ACCY 111, 20-25% enjoyed their other courses to about the same degree as ACCY 111, and approximately 1/3 enjoyed their other courses less than ACCY 111. The 40-45% group was largely constant throughout the course, except for a 5 percentage point increase at the end of the course. The 20-25% group steadily increased from 10% to 20% to 25% as the course progressed. The last 1/3 group started at 40% at the beginning of the course and was roughly a constant 30% thereafter, students seemingly progressively reassessing greater enjoyment of ACCY 111 to “about the same” enjoyment as other courses as they progressed in ACCY 111.

The ratio of students in the control group at the end of the course indicating that they enjoyed ACCY 111 less than:about the same:more than their other Trimester 2, 2010 courses was 4:2:1. In the control group there was also a nearly 2:1 ratio preferring the financial accounting component to the management accounting component. Some students in the control group indicated a preference for tutorial instruction or online exercises (MAL). The latter response reconciles with a survey of student reaction to the use of MAL conducted at the end of Trimester 1, 2009, when it was first introduced into the course.

5.2.5 *Usefulness of the Course*

As to students’ perceptions of the usefulness of the course in the future, on a Likert scale of 1-5 (1=not very useful; 5=very useful), the average response in Week 1 was 4. That

rating fell to 3.7 in the subsequent two surveys and rose again to 4 at the end of the course. The corresponding rating for the control group was 3.6. Overall, we are reasonably satisfied that the students found the course quite useful in terms of their future plans.

When compared with the usefulness of other courses that the students were studying concurrently with ACCY 111, the ACCY 111 rating fell to 3.7 in the last week of the course. The corresponding control group rating was 3.2.

5.2.6 Perceived Difficulty of ACCY 111

As to students' perceptions of the difficulty of the course, on a Likert scale of 1-5 (1=very easy; 5=very difficult), the average response in Week 1 was 2.8. That rating rose to 3.1 by the second week and rose again to 3.6 in the week following the Mid-trimester Test. Some students commented that the more computational the content became, the more difficult the course became.

5.2.7 Student comments

The three most repeated general student comments given in the interviews and by the control group were:

- those who have studied Accounting at school and/or are majoring in Accounting find ACCY 111 too easy, to the point of boredom, resulting in non-attendance at lectures and disengagement from the course. On the other hand, many students who have not studied Accounting before find the course extremely difficult. This is a comment that has also been made repeatedly in past end-of-course surveys. We therefore have particular concerns about continuing to offer a course on a "one-size-fits-all" basis.
- a widespread desire for more tutorials and better quality tutorials where tutors facilitate discussion of the subject matter, rather than merely traversing the answers to the set questions.
- a preference for online interactive learning.

6. Remedial Action

Although further analytical work still needs to be undertaken on the data obtained during the project, our preliminary analysis has indicated areas where immediate action can be taken to improve the student experience in ACCY 111. The information that we have discerned from the project to a large extent confirms our intuitive knowledge and concerns about the course, such that we are confident that proceeding with some reforms immediately is justified.

In 2011, we have:

- Instigated consistency in the delivery and content of different offerings of the course in different trimesters, and appointed a team of three senior academic staff members to oversee the formulation and implementation of changes to the School of Accounting & Commercial Law's offerings of first-year accounting courses.
- Increased the use of MAL as a means of delivery of ACCY 111 and made student performance using MAL account for 50% of a student's final grade for the course.
- Improved our tutor selection process to augment the quality of tutors employed, appointed a mentor tutor to assist (primarily) new tutors in ACCY 111, and increased the liaison time between the lecturers and the tutors, with a view to emphasising, encouraging and facilitating debate in tutorials, rather than mere delivery of solutions to tutorial questions.
- Obtained approval to split ACCY 111 into two separate courses from 2012:
 - One more challenging and advanced course for Accounting major, and other appropriately qualified, students; and
 - One course for non-accounting majors.

7. Further investigation

While we have put in place some immediate measures in response to the outcomes of our investigation, fundamental issues remain, which require further investigation. A number of these issues we believe are university wide issues, although some are more specific to the BCA degree and perhaps ACCY 111. Issues for further investigation include:

7.1 *Preparation for university*

The statistical review of the 2009 cohort has indicated the importance of performance in NCEA in predicting student performance in ACCY 111. This raises the following issues:

- Is the university (or degree) entry level at an appropriate level? Should the university increase the minimum level and/or number of credits for entry to either the university or the BCA degree?
- Are there skills that (some) students fail to obtain at school but are essential for university success? What are these skills and do we have mechanisms to identify and remedy such gaps in incoming students' skills and knowledge? Or are we continuing to support student performance below ability, or worse accepting student failure as inevitable?
- Should we rely on NCEA to provide relevant skills and knowledge for university entrance?

7.2 *Ethnicity*

Based on the 2009 cohort all ethnic groups performed worse than New Zealand/Pakeha. This raises issues at both the teaching level and at the institutional level. Issues for further consideration include:

- Are there university preparation or institutional factors at play causing differences in performance based on ethnicity?
- Accepting that business and accounting are cultural artifacts, are we assuming too much Western culture in our teaching? In our teaching do we need to be more specific about our assumptions about the nature of business, commerce, organizations and accounting for entities?

7.3 *Performance of accounting and economic students compared to other majors*

Students that select accounting and economic majors performed better than those that select other majors. Implications for the development of new course arrangements include:

- Does ACCY 111 have a strong focus on economic worldview and thinking patterns and therefore is biased to those students inclined to that view? How do we deal with this for both students inclined to this world view and those that are not?
- As per 7.2 above; accepting that business and accounting are cultural artifacts, are we assuming too much in our teaching? In our teaching do we need to be more specific about our assumptions about the nature of business, commerce, organizations and accounting for entities?

7.4 *Student participation*

Student participation and take up of additional learning opportunities is uneven, often only by those that are succeeding already.

- How do we increase participation in different course components (e.g. online and tutorials)? Are we providing more only for it to be used by those that don't need it?
- Opportunities are provided, but not taken up by students: is there something wrong with how or what we provide to students, or are students lazy or too busy?
- What are the costs and benefits of further interventions? How can we measure them?
- Students reported working longer on courses with higher pass rates than on ACCY 111. Difficulty to pass does not seem to be a driver for student effort. We need to consider what drivers student effort.

7.5 *Final comment*

- How faculty and university wide are these issues?
