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# AN INVESTIGATION INTO THE SUCCESS RATES OF THIRD-YEAR ACCOUNTING CONVERSION STUDENTS EN ROUTE TO BECOMING A CHARTERED ACCOUNTANT (SOUTH AFRICA)

## ABSTRACT

*Stellenbosch University students who graduated with a Bachelor of Commerce in Management Accounting or a Bachelor of Commerce in Financial Accounting may convert to a Bachelor of Accounting by completing a conversion year. The purpose of the conversion year is to meet the Bachelor of Accounting Honours admission requirements, which puts students on course to become a Chartered Accountant (South Africa). No previous research has investigated the success rates of these conversion students; therefore, current prospective third-year conversion students have no frame of reference to make an informed decision regarding whether or not to attempt the conversion year. The research reported in this paper sought to analyse the results of third-year conversion students to conclude on their success rate of being admitted to the Bachelor of Accounting Honours programme and their success rate in obtaining a Bachelor of Accounting Honours degree. A quantitative research method was applied and it was found that 37% of the third-year conversion students met the Bachelor of Accounting Honours admission requirements at the first attempt and only 19% of the third-year conversion students managed to obtain their Bachelor of Accounting Honours degree in the minimum amount of time. Receiver operating curve analyses were also done to predict optimal cut-off marks to meet the Bachelor of Accounting Honours admission requirements and to obtain this degree in the minimum amount of time.*

**Keywords:** *Accounting education; third-year conversion student; student success; conversion year.*



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## 1. INTRODUCTION AND BACKGROUND

At Stellenbosch University (SU) students who graduated with a Bachelor of Commerce (B. Commerce) in Management Accounting or a B. Commerce in Financial Accounting have the opportunity to convert to a Bachelor of Accounting (B. Accounting) by completing a conversion year. The

conversion year entails the following: after obtaining one of the above-mentioned degrees these students can register as a special student (non-degree purposes) for the four main B. Accounting third-year subjects (Financial Accounting, Management Accounting, Auditing and Taxation) and Mercantile Law (a B. Accounting second-year module not included in the B. Commerce programme). The purpose of this arrangement and the reason why most students decide on this conversion year is to meet the B. Accounting Honours admission requirements which puts them on course to become a Chartered Accountant (South Africa) (CA[SA]).

The B. Accounting Honours admission requirements are as follows: 60% weighted average for the four professional third-year B. Accounting subjects or 55% weighted average for the four professional third-year B. Accounting subjects and 55% for Financial Accounting (Stellenbosch School of Accountancy, 2019). The weighted average is calculated as follows with weightings used in the calculation shown in brackets: Financial Accounting 379 (4), Management Accounting 378 (4), Taxation 399 (3) and Auditing 378 (3). These weightings changed in 2015. The 2014 B. Accounting Honours admission requirements applied the following weightings: Financial Accounting 379 (4), Management Accounting 378 (3), Taxation 399 (3), and Auditing 378 (3). Third-year B. Accounting conversion students may present Management Accounting 388 (a third-year B. Commerce Management Accounting or Financial Accounting subject) instead of Management Accounting 378 (a third-year B. Accounting subject) for selection purposes if the former was passed with a minimum final mark of 60%. All the subjects need not be passed in one year, but subjects must be passed within two years before the start of the B. Accounting Honours programme for which the student is applying.

SAICA accredits university's Accounting programmes where students can study towards becoming a CA(SA). One way of measuring the success of these programmes is students' performance in the initial test of competence (ITC) exam. This exam is independently set by SAICA and therefore places all students at a level "playing field" when completing this exam. The ITC results for January 2020 indicates the top five accredited programmes, in terms of students' pass rate in this exam, as University of Pretoria (92% pass rate), Nelson Mandela University (88%), North-West University (80%), Stellenbosch University (79%) and University of the Witwatersrand (78%) (SAICA, 2020). It was deemed worthwhile to investigate whether the other four universities (except for SU on which this study is based and that make up the top five in terms of their performance in the ITC exam) also offer their students not on the CA(SA) route the opportunity of a conversion year after graduating.

University of Pretoria, Nelson Mandela University, North-West University and University of the Witwatersrand all offer their undergraduate students not on the CA(SA) route the opportunity to convert to their equivalent of a B. Accounting (CA[SA]) route. The form of this conversion year differs. Nelson Mandela University and North-West University's conversion year takes the form of a postgraduate diploma in Accountancy (Viviers, 2020; Nelson Mandela University, 2020). University of Pretoria and University of the Witwatersrand requires students to do an additional third year in order to convert to the CA(SA) route (Jonker, 2020; Oberholster, 2020) (this is similar to SU's conversion year).

## 2. LITERATURE REVIEW

In order to identify the gap in the current literature it is important to review all available current or related studies done on the success rates of third-year B. Accounting conversion students en route to becoming a CA(SA). The pearl growing or snowballing search strategy, together with

the building blocks search strategy, was the main strategy used to obtain literature relevant to the research. The following SU library databases were searched: ProQuest (Business Premium Collection & Education Database), EBSCO Host (Academic Search Premier, Africa Wide Information, Business Source Premier, EconLit and ERIC), Scopus, Sabinet African Journals, Emerald and Google Scholar.

Rossouw and Brink (2020) investigated the success rates of first-year B. Accounting conversion students (with no prior Accounting knowledge) in obtaining a professional Accounting degree. According to the admission requirements at SU, students are not required to have completed Accounting at secondary school level in order to enrol for a B. Accounting degree. These students, with no prior Accounting knowledge, can therefore register as a B. Accounting student with all the same subjects as other B. Accounting students (students who had Accounting at secondary level) with only one exception – they will be registered for an introductory Accounting module (as opposed to other B. Accounting students who will be registered for a more advanced Accounting module). When these students pass the introductory Accounting module at the end of their first year at university, they must write an Accounting conversion examination. If they pass the Accounting conversion examination, they can join their peers (who had Accounting at secondary level) from second-year B. Accounting onwards (Rossouw & Brink, 2020).

Rossouw and Brink (2020) found that 50% of the first-year B. Accounting conversion students were successful in obtaining their professional degree in Accounting within the minimum time of three years and 81% of these students eventually obtained their professional degree in Accounting (up until the date of the study), irrespective of how long it took. Rossouw and Brink's (2020) finding suggests that Accounting as a subject at secondary school is not necessarily essential to obtain a professional degree in Accounting.

It is important to note the difference between a first-year B. Accounting conversion student, i.e. a student registered as a B. Accounting student from year one (as investigated in Rossouw and Brink's [2020] article) and a third-year B. Accounting conversion student, i.e. a student who completed a B. Commerce degree (in Management Accounting or Financial Accounting) and enrolled for a B. Accounting conversion year (as investigated in the study at hand). Rossouw and Brink's (2020) research investigated only the success rates of first-year B. Accounting conversion students and identified third-year B. Accounting conversion students' success rates as an area for further research. Rossouw and Brink (2020) also highlighted that the current body of knowledge contains minimum research that focuses on Accounting conversion students.

The literature on Accounting students' success at tertiary level focuses predominantly on first-year Accounting students. These studies (Rowlands, 1988; Christopher & Debreceeny, 1993; Gul & Fong, 1993; Van Rensburg, Penn & Haiden, 1998; Gammie, Paver, Gammie & Duncan, 2003; Hartnett, Römcke & Yap, 2004; Du Plessis, Müller & Prinsloo, 2005; Müller, Prinsloo & Du Plessis, 2007; Baard *et al.*, 2010; Papageorgiou & Townsend, 2014; Bosua & Van der Nest, 2015; Papageorgiou, 2017) investigated various factors that might have an influence on the success of first-year Accounting students. These factors include pre-university knowledge (such as whether students had Accounting as a subject at secondary school), class attendance, home language and language proficiency, race, gender, motivation and personality type to name a few. Specifically relevant to this study (refer to the secondary research question) is the impact of prior Accounting knowledge on the success of Accounting

students at tertiary level. Existing research indicates that Accounting at school level is significantly associated with students' academic performance in first-year undergraduate Accounting (Baard *et al.*, 2010; Bosua & Van der Nest, 2015; Papageorgiou, 2017). Limited research has been expanded to investigate Accounting students' performance or success rates beyond the first year at university (including a conversion year).

Various studies (Byrne & Willis, 2003; Jackling & Calero, 2006; Tan & Laswad, 2006; Jackling & Keneley, 2009; Sugahara, Hiramatsu & Boland, 2009; Baxter & Kavanagh, 2013; Wen, Hao & Bu, 2015; Tang & Seng, 2016; Bekoe *et al.*, 2018; Owusu *et al.*, 2018) have examined students' attitudes towards Accounting as a discipline and explored the dominant factors that influence students' intentions to major in Accounting and consequently to pursue a career in Accounting. Under review in this study were third-year B. Accounting students who converted from a B. Commerce degree to majoring in Accounting. These students decided to change their major to Accounting in order to pursue a career in Accounting. What drove this decision and whether these factors had an impact on the conversion students' success rates were excluded from the scope of the study.

Lubbe (2017: 60) makes a strong argument that the existing Business and Accounting undergraduate curriculum for the Chartered Accountant qualification should be extended from a three-year period to a period of four years, giving students the option of more time to master the core curriculum and competencies required. Lubbe (2017: 60) states that the extended curriculum will enable students to progress in accordance with their level of preparedness and personal circumstances, maximising their chances of successfully completing the degree. The third-year B. Accounting conversion students will also extend their three-year undergraduate period to four years in order to qualify as a CA(SA). Even though these students in effect have an extra year to master the undergraduate B. Accounting curriculum this will not necessarily guarantee success and therefore calls for further investigation.

Davidson (1976: 104-106) examined article clerks' pass rates in the professional examination (I and II) in order to predict the chances of a student becoming a chartered accountant in Great Britain. This study did not consider the student's performance at tertiary level. Khomsiyah and Lindrianasari (2017) examined the correlation between student's education and the likelihood of these students becoming a chartered accountant. The study found that the universities where the students obtained their B. Accounting qualifications were not correlated with CA membership, but other factors such as the length of time since graduation, type of employment and occupation indicated a correlation. As discussed later in the paper, B. Accounting conversion students' performance beyond the B. Accounting Honours degree was excluded from the scope of this study.

Current Accounting education literature focuses strongly on the impact of prior Accounting knowledge on student performance at tertiary level. Several studies (Schroeder, 1986; Eskew & Faley, 1988; Farley & Ramsay, 1988; Keef & Hooper, 1991; Gul & Fong, 1993; Rhode & Kavanagh, 1996; Rankin *et al.*, 2003; Uyar & Güngörmüş, 2011) investigated the impact of secondary school Accounting on first-year undergraduate Accounting students' performance and agreed that Accounting at school level is significantly associated to students' performance. Van Rensburg *et al.* (1998) and Yee Lee (1999) expanded their studies on the impact of prior Accounting knowledge on university Accounting performance to include Accounting I and II. Both studies reached the same conclusion, namely that students with prior Accounting knowledge significantly outperformed students without high school Accounting qualification

in Accounting I, but not in Accounting II (Van Rensburg *et al.*, 1998: 93; Yee Lee, 1999: 301). Papageorgiou and Halabi (2014) investigated student performance in Accounting modules throughout the three years of a Bachelor of Accounting Science degree offered through distance education. Their study found that prior Accounting knowledge was significantly associated with student performance in their first year of study but not thereafter (Papageorgiou & Halabi, 2014: 211). Limited research has studied the impact of prior Accounting knowledge on university performance beyond the first academic year.

It is evident from all the available literature that there is a gap in the existing body of knowledge on the success rates of third-year B. Accounting conversion students en route to becoming a CA(SA).

### 3. RESEARCH PROBLEM

The success rates of third-year B. Accounting conversion students at a residential university has not yet been established. This means that prospective third-year B. Accounting conversion students currently have no frame of reference to make an informed decision on whether to attempt the conversion year. Student counsellors and student advisers are also currently in the dark when it comes to advising these students and providing them with previous statistics on success rates. The B. Accounting conversion year admission requirements (namely to have only a B. Commerce degree in Management Accounting or Financial Accounting and no specific minimum marks required) have also not been tested to establish whether students that meet the current requirements are eventually successful.

### 4. RESEARCH OBJECTIVE AND QUESTIONS

The objective of this research was to analyse the results of third-year B. Accounting conversion students in order to conclude on their success rate of being admitted to the B. Accounting Honours programme and obtaining a B. Accounting Honours degree. Based on the extensive literature review provided in the previous section, four research questions were developed to meet the research objective, as indicated below.

#### 4.1 Primary research questions

The following primary research questions were formulated:

1. What is the success rate of third-year B. Accounting conversion students in meeting the B. Accounting Honours admission requirements at the first attempt?
2. What is the success rate of third-year B. Accounting conversion students in obtaining a B. Accounting Honours degree in the minimum amount of time?
3. What is the minimum mark for the four main subjects and the minimum average mark (for the four main subjects weighted with reference to module credits) to obtain in third-year B. Commerce to ensure that the B. Accounting Honours admission requirements have been met at the first attempt?
4. What is the minimum mark for the four main subjects and the minimum average mark (for the four main subjects weighted with reference to module credits) to obtain in third year B. Commerce in order to successfully obtain a B. Accounting Honours degree in the minimum amount of time?

## 4.2 Secondary research question

The admission requirements at SU for B. Commerce in Management Accounting or Financial Accounting do not require students to have completed Accounting at secondary school level (Stellenbosch University, 2019), meaning that it is possible that the third-year B. Accounting conversion students did not have Accounting at secondary level. Based on the great focus that current literature on Accounting education places on the impact of prior Accounting knowledge at tertiary level (as discussed in the literature review), it was deemed worthwhile to compare third-year B. Accounting conversion students' performance, based on whether they had studied Accounting at secondary school. The following secondary research question was formulated:

How does the performance of third-year B. Accounting conversion students with Accounting at secondary level compare with the performance of conversion students with no prior Accounting knowledge?

## 5. CONTRIBUTION OF THE RESEARCH

The study was motivated by the need to provide prospective third-year B. Accounting conversion students with statistics of previous conversion students' success rates to enable them to make an informed choice about converting to B. Accounting. It was felt that this research can also assist student counsellors and student advisers when dealing with prospective third-year B. Accounting conversion students who have to decide whether to convert to B. Accounting.

The aim was that the study would not only indicate the success rates of third-year B. Accounting conversion students, but also the minimum mark for the four main subjects and the minimum average mark to obtain in the B. Commerce degree that will (statistically) ensure that the B. Accounting Honours admission requirements will be met and that a B. Accounting Honours degree will eventually be obtained. This research would therefore inform these students what is expected of them to be successful in their purpose of becoming a CA(SA). This information might reduce the risk of prospective third-year B. Accounting conversion students failing or of wasting additional year(s) of study.

The research will also serve as a benchmark to test the current third-year B. Accounting conversion year admission requirements and will indicate whether these requirements (namely to have only a B. Commerce degree in Management Accounting or Financial Accounting and no specific minimum marks) should perhaps be adjusted. The research described is novel, as such research has not yet been undertaken.

## 6. SCOPE AND LIMITATIONS

The results of the third-year B. Accounting conversion students were analysed for a fixed period (five years) only and at one South African university. The study also only included third-year B. Accounting conversion students' success rate for meeting the B. Accounting Honours admission requirements and obtaining their B. Accounting Honours degree. Excluded from the scope of the study was, therefore, whether these students eventually qualify as a CA(SA). The findings of the study (specifically relating to primary research question 4) also excluded students who had successfully completed the conversion year and decided to enrol for a B. Accounting Honours degree at another university.

Even though the study was conducted in South Africa (where the problem was identified) it is believed that the findings can also be applied internationally for comparative study purposes should a similar study be done internationally. The reported results are not generalisable beyond the scope of the study itself, however, the research provides valuable information to prospective third-year B. Accounting conversion students (and/or their lecturers or student counsellors and advisers) and can be applied to inform B. Accounting conversion year admission decisions at SU.

## 7. RESEARCH METHODOLOGY

This research study used a quantitative research method, focusing on third-year B. Accounting conversion students' success rates for meeting the B. Accounting Honours admission requirements upon completing the conversion year and obtaining their B. Accounting Honours degree (a total minimum two-year period). In order to answer the research questions, the relevant data were collected from the university's central computer system after ethics approval was obtained.

The methodologies of previous studies on Accounting students' performance involved data relating to various periods. Data that were retrieved covered one year (Baard *et al.*, 2010; Oosthuizen & Eiselen, 2012), two years (Bosua & Van der Nest, 2015), three years (Van Rensburg *et al.*, 1998) and five years (Papageorgiou, 2017). To ensure that a comprehensive study would be done it was decided, based on Papageorgiou's (2017) research, to analyse a period of five years as well. This would eliminate the risk of a too small population that might cause insignificant relationships.

In order to meet the research objective and to answer the research questions it was necessary to use data for the years in which a student could have completed his or her conversion year and the B. Accounting Honours year (a total minimum of two years) by the time of this study. The study therefore identified all third-year B. Accounting conversion students (registered as special students) from 2013 to 2017. These students would have completed their B. Commerce degree in 2012 to 2016, attempted the conversion year in 2013 to 2017 and attempted B. Accounting Honours in 2014–2018 (assuming the minimum time frame).

The data retrieved included the marks the third-year B. Accounting conversion students obtained in their:

- B. Commerce third year for the four main subjects (2012–2016), and
- B. Accounting conversion year for the four main subjects (2013–2017), and
- B. Accounting Honours year final mark (2014–2018),

and whether they had studied Accounting at secondary level.

The four main subjects for the third-year B. Commerce in Management Accounting programme are Financial Accounting 389 (48 credits), Management Accounting 388 (48 credits), Taxation 388 (24 credits) and Auditing 388 (24 credits). The four main subjects for third-year B. Commerce in Financial Accounting are the same as for B. Commerce in Management Accounting, except for Auditing 378 (24 credits) (instead of Auditing 388). The average mark for third-year B. Commerce was calculated with reference to module credits for each subject (as indicated above). The four main subjects for third-year B. Accounting are Financial Accounting 379, Management Accounting 378, Taxation 399 and Auditing 378.

If a third-year B. Accounting conversion student repeated their B. Commerce third year before registering as a special student those marks were also retrieved (2012–2016) for purposes of answering primary research questions 3 and 4. If a third-year B. Accounting conversion student did not meet the B. Accounting Honours admission requirements at the first time attempt and decided to attempt the year again, those marks were also retrieved (2014–2017) for purposes of determining whether the student met the B. Accounting Honours admission requirements at a later stage. If a third-year B. Accounting conversion student did not pass B. Accounting Honours the first time around and decided to attempt the year again, those marks were also retrieved (2015 to 2018) for purposes of determining whether the student passed B. Accounting Honours at a later stage.

It must be noted that third-year B. Accounting conversion students who successfully complete the conversion year and meet the SU B. Accounting Honours admission requirements might decide to conclude their studies and not attempt the year or they might enrol at another university for a B. Accounting Honours degree. These students were excluded from the results from answers to research question 4, as discussed in Section 6 (Scope and limitations).

For the purposes of determining the success rate in this study, a successful student was defined as a third-year B. Accounting conversion student who meets the B. Accounting Honours admission requirements upon completing the conversion year and who passes the B. Accounting Honours year (obtaining a minimum mark of 50% for each B. Accounting Honours subject) consecutively after their conversion year (i.e. in a minimum time of two years).

## 8. STATISTICAL ANALYSIS

The data were processed and analysed using the Statistica application (version 13.4.0.14) and the R package 'pROC' version 1.15.3. Receiver operating curve (ROC) analyses were used to establish cut-off points. Sensitivity and specificity ratios were determined. An analysis of variance (ANOVA) test was used for secondary research question 1 where a 5% significance level was applied. The statistician involved in the research project is satisfied that the statistical calculations and interpretation of the statistics are correct.

## 9. RESEARCH RESULTS AND FINDINGS

The population selected for testing consisted of all third-year B. Accounting conversion students for the period 2013–2017 and resulted in 134 data items. The third-year B. Accounting conversion year also requires students to enrol for Mercantile Law. Even though Mercantile Law is not a subject considered in the B. Accounting Honours admission requirements, students still need to pass this subject. From the population of 134 students, only 14 students failed Mercantile Law, but this was not the reason why the B. Accounting Honours admission requirements were not met. Mercantile Law was therefore irrelevant to this study.

### Primary research question 1: What is the success rate of third-year B. Accounting conversion students in meeting the B. Accounting Honours admission requirements at the first attempt?

For the five years under review, 37% (50/134) of the third-year B. Accounting conversion students met the B. Accounting Honours admission requirements at the first attempt. Of the 63% (84/134) of the third-year B. Accounting conversion students who did not meet the B. Accounting Honours admission requirements the first time, 19% (26 students) completed the

conversion year a second time and only 13% (18 students) then met the B. Accounting Honours admission requirements. The remaining 43% (58 students) did not attempt the conversion year a second time and never met the B. Accounting Honours admission requirements. These results, which are based on information available at the date of the study, are summarised in Table 1 below.

**Table 1:** Summary of third-year B. Accounting conversion students' admission to B. Accounting Honours

	Number	Percentage
Students who met the B. Accounting Honours admission requirements at the first attempt	50	37%
Students who did not meet the B. Accounting Honours admission requirements at the first attempt	84	63%
Students who met the B. Accounting Honours admission requirements after completing the conversion year a second time	18	13%
Students who did not meet the B. Accounting Honours admission requirements after completing the conversion year a second time	8	6%
Students who never met the B. Accounting Honours admission requirements	58	43%
	134	100%

### Primary research question 2: What is the success rate of third-year B. Accounting conversion students in obtaining a B. Accounting Honours degree in the minimum amount of time?

Only 19% (26/134) of the third-year B. Accounting conversion students managed to obtain their B. Accounting Honours degree in the minimum amount of time. Of the 81% (108 students) who did not manage to obtain their B. Accounting Honours degree in the minimum amount of time, 17% (22 students) obtained the degree after attempting Honours more than once, completing the conversion year twice or both. Eleven per cent (15 students) never obtained a B. Accounting Honours degree after attempting Honours more than once, completing the conversion year twice (8 students who never met the B. Accounting Honours admission requirements) or both. Fifty-three per cent (71 students) never obtained a B. Accounting Honours degree. Some of them never met the B. Accounting Honours admission requirements (58 students), and some met the B. Accounting Honours admission requirements but never attempted the year (3 students) or attempted it once (10 students) without success. These results, which are based on information available at the date of the study, are summarised in Table 2 below.

**Table 2:** Summary of third-year B. Accounting conversion students' B. Accounting Honours graduation status

	Number	Percentage
Students who obtained a B. Accounting Honours degree in the minimum amount of time	26	19%

	Number		Percentage
Students who did not obtain a B. Accounting Honours degree in the minimum amount of time	108		81%
Students who obtained a B. Accounting Honours degree in more than the minimum time frame	22		17%
Students who did not obtain a B. Accounting Honours degree after attempting the conversion year and/or honours more than once	15		11%
Students who did not obtain a B. Accounting Honours degree	71		53%
	134		100%

Eventually, 36% (48/134) of the third-year B. Accounting conversion students managed to obtain their B. Accounting Honours degree (irrespective of how long it took) and therefore had the opportunity to become a CA(SA).

Considering the results of primary research questions 1 and 2, namely that 37% of the third-year B. Accounting conversion students met the B. Accounting Honours admission requirements at the first attempt and only 19% of the third-year B. Accounting conversion students managed to obtain their B. Accounting Honours degree in the minimum amount of time, it is clear that the current conversion year admission requirements are insufficient. This matter will be further explored after considering the results of primary research questions 3 and 4.

Responses to primary research question 1 revealed that there were 68 students who met the B. Accounting Honours admission requirements (irrespective of how long it took). In order to obtain an idea of the success rate of the third-year B. Accounting conversion students who met the B. Accounting Honours admission requirements only these students' results were analysed.

Thirty-eight per cent (26/68) of the third-year B. Accounting conversion students who met the B. Accounting Honours admission requirements managed to obtain their B. Accounting Honours degree in the minimum amount of time. Of the 62% (42 students) who did not manage to obtain their B. Accounting Honours degree in the minimum amount of time, 33% (22 students) obtained the degree after attempting Honours more than once, completing the conversion year twice. Ten per cent (7 students) never obtained a B. Accounting Honours degree after attempting Honours more than once, completing the conversion year twice or both. Nineteen per cent (13 students) never obtained a B. Accounting Honours degree. Some of these students met the B. Accounting Honours admission requirements but never attempted the year (3 students) or attempted it once (10 students) without success. These results, which are based on information available at the date of the study, are summarised in Table 3 below.

**Table 3:** Summary of the success rate of third-year B. Accounting conversion students who met the B. Accounting Honours admission requirements

	Number		Percentage
Students who obtained a B. Accounting Honours degree in the minimum amount of time	26		38%
Students who did not obtain a B. Accounting Honours degree in the minimum amount of time	42		62%

	Number	Percentage
Students who obtained a B. Accounting Honours degree after more than two years after completing the first conversion year	22	33%
Students who did not obtain a B. Accounting Honours degree after attempting the conversion year and/or honours more than once.	7	10%
Students who did not obtain a B. Accounting Honours degree	13	19%
	68	100%

Eventually, 71% (48/68) of the third-year B. Accounting conversion students who met the B. Accounting Honours admission requirements managed to obtain their B. Accounting Honours degree (irrespective of how long it took).

### Primary research question 3: What is the minimum mark for the four main subjects and the minimum average mark to obtain in third-year B. Commerce to ensure that the B. Accounting Honours admission requirements have been met at the first attempt?

ROC analyses were done for all the main subjects as well as the average obtained in third-year B. Commerce to predict optimal cut-off marks in order to meet the B. Accounting Honours admission requirements. Again, the four main subjects for third-year B. Commerce in Management Accounting are Financial Accounting 389, Management Accounting 388, Taxation 388 and Auditing 388. The four main subjects for third-year B. Commerce in Financial Accounting are the same as for B. Commerce in Management Accounting, except for Auditing 378 (instead of Auditing 388). The ROC analyses were also used to determine the area under the curve (AUC), which is an indicator of the overall accuracy of the predictions made. The ROC analyses and AUCs are summarised in Table 4 below.

Based on the results for the average mark obtained for the four main subjects, the ROC and AUC results can be interpreted as follows: if a student obtains an average of 58.5% for their four main subjects in B. Commerce, they should be able to meet the minimum admission requirements for B. Accounting Honours at the first attempt. This finding is considered 93% accurate (with AUC reported as 0.93). The sensitivity of 88% indicates that in 88% of the cases reported, students who achieved an average of 58.5% (or more) were successful in meeting the admission requirements at the first attempt. The specificity of 83% indicates that 83% of the cases reported, where students who obtained less than 58.5%, were correct in predicting that they would not meet the minimum admission requirements. The interpretations for all the individual subjects reported in Table 4 follow the same explanation as for the average mark.

**Table 4:** Receiver operating curve analyses with area under curve for B. Accounting Honours admission requirements being met at the first time attempt

	Cases reported	ROC	Sensitivity	Specificity	AUC
Financial Accounting 389	134	62.5	82%	83%	0.89
Management Accounting 388	134	57.5	76%	82%	0.87

	Cases reported	ROC	Sensitivity	Specificity	AUC
Taxation 388	134	61.5	78%	80%	0.89
Auditing 388	35	52.5	67%	60%	0.67
Auditing 378	99	51.5	89%	88%	0.91
Average for four main subjects	134	58.5	88%	83%	0.93

It is clear from the above that the current conversion year admission requirements (namely to have only a B. Commerce degree in Management Accounting or Financial Accounting and no specific minimum marks requirement) are insufficient. It is therefore recommended that the admission requirements for B. Accounting conversion students be adjusted, possibly requiring a subminimum average mark and/or sub-minimum marks for individual subjects.

Under the assumption that B. Accounting conversion students mainly opt for the conversion year with the aim of obtaining a B. Accounting Honours degree, the results from primary research questions 3 and 4 should be considered when recommending possible sub-minimum marks to be included in the conversion year admission requirements. These sub-minimum marks will therefore be discussed after considering the results of primary research question 4.

### Primary research question 4: What is the minimum mark for the four main subjects and the minimum average mark to obtain in third-year B. Commerce in order to obtain a B. Accounting Honours degree in the minimum amount of time?

ROC analyses were done for all the main subjects as well as the average obtained in third-year B. Commerce to predict optimal cut-off marks in order to obtain a B. Accounting Honours degree in the minimum time (i.e. in one year after admission requirements have been met). The ROC analyses were also used to determine the AUC, which is an indicator of the overall accuracy of the predictions made. The ROC analyses and AUCs are summarised in Table 5 below.

Again, the results are interpreted based on the average mark for the four main subjects in B. Commerce in Financial Accounting or B. Commerce in Management Accounting. The results indicate that if a student obtains an average of 61.5% for their four main subjects in B. Commerce, they should be able to obtain their B. Accounting Honours degree in the minimum amount of time. This finding is considered 85% accurate (with AUC reported as 0.85). The sensitivity of 81% indicates that in 81% of the cases reported, students who achieved an average of 61.5% (or more) for their four main subjects in B. Commerce were successful in obtaining the B. Accounting Honours degree in the minimum time. The specificity of 83% indicates that in 83% of the cases reported, where students who obtained less than 61.5%, the prediction that they would not obtain the degree in the minimum amount of time was correct. The interpretations for all the individual subjects reported in Table 5 follow the same explanation as for the average mark.

**Table 5:** Receiver operating curve analyses with area under curve for B. Accounting Honours degree in minimum time

	Cases reported	ROC	Sensitivity	Specificity	AUC
Financial Accounting 389	134	64.5	77%	75%	0.83
Management Accounting 388	134	57.5	89%	72%	0.89
Taxation 388	134	66.5	73%	83%	0.82
Auditing 388	35	59.5	63%	85%	0.77
Auditing 378	99	51.5	83%	70%	0.85
Average for four main subjects	134	61.5	81%	83%	0.89

Considering the results obtained from answering primary research questions 3 and 4, some adjustments to the current conversion year admission requirements are proposed. It is suggested that a sub-minimum average mark of 61.5% be required for the four main subjects. Financial Accounting and Management Accounting are the two subjects with the highest allocated credits and also the two subjects contributing most to the B. Accounting Honours admission requirements. It is therefore recommended that these two subjects be included in the conversion year admission requirements. A further requirement is a sub-minimum mark of at least 64.5% for Financial Accounting 389 and a sub-minimum mark of at least 57.5% for Management Accounting 388.

These recommendations are based on statistical results from the ROC's and reflect the average marks that result in optimal success prediction. If these averages were to be lowered (or increased) from what the authors recommend for the admission requirements, it should be noted that the AUC will change and may lead to lowered success rates.

### Secondary research question: How does the performance of third-year B. Accounting conversion students with Accounting at secondary level compare with the performance of conversion students with no prior Accounting knowledge?

The results of the population were further analysed, based on whether these students studied Accounting as a subject in secondary school. Eighty per cent of the population (107/134) had studied Accounting as a subject at secondary school. Their average marks for B. Commerce were compared with the average marks of third-year conversion students who did not study Accounting as a subject at secondary school (refer to Table 6 below). The difference in these participants' average scores for their four main B. Commerce subjects combined, as well as for each individual subject, were not considered significant.

**Table 6:** B.Accounting conversion students and whether (or not) they had studied Accounting at secondary school

	Accounting at secondary school	No Accounting at secondary school	F	F p-value
B. Accounting conversion students	107	27		

	Accounting at secondary school	No Accounting at secondary school	F	F p-value
Average for four main subjects	58.91%	58.67%	0.20	0.66
Average for Financial Accounting 389	62.29%	61.07%	0.27	0.61
Average for Management Accounting 388	56.77%	57.15%	0.05	0.82
Average for Taxation 388	61.02%	60.81%	0.01	0.92
Average for Auditing 388	56.32%	54%	0.65	0.43
Average for Auditing 378	53.13%	53.8%	0.21	0.65

It seems as though the deficit for students who did not study Accounting at secondary school (versus those who did study it) had been eradicated by the time that these students obtained their B. Commerce (either in Management Accounting or Financial Accounting) degree. The results for conversion students who did study Accounting at secondary school, versus those who did not, were therefore not analysed any further.

### 10. SUMMARY, CONCLUSION AND RECOMMENDATIONS

Stellenbosch University offers students who graduated with a B. Commerce Management Accounting or B. Commerce Financial Accounting degree the opportunity to do a conversion year. The purpose of the conversion year is to meet the B. Accounting Honours admission requirements in order to become a CA(SA). A quantitative research method was applied to analyse and conclude on the success rate of B. Accounting conversion students admitted to the B. Accounting Honours programme and their success rate in obtaining a B. Accounting Honours degree.

The population selected for testing consisted of all third-year B. Accounting conversion students for the period 2013–2017 and resulted in a population of 134 items. Based on the population of 134 students it was found that 50 (37%) B. Accounting conversion students met the B. Accounting Honours requirements after their first attempt. Eventually, another 18 (13%) B. Accounting conversion students met the requirements in more than one year. It was concerning to note that 66 (49%) B. Accounting conversion students never met the admission requirements. Based on the population of 134 students it was found that only 26 (19%) B. Accounting conversion students obtained a B. Accounting Honours degree in the minimum amount of time. Another 22 (17%) B. Accounting conversion students obtained a B. Accounting Honours degree in more than the minimum time frame. The remaining 86 (64%) B. Accounting conversion students never managed to obtain their B. Accounting Honours degree (including 66 B. Accounting conversion students who never met the B. Accounting Honours admission requirements).

It was determined, with the use of ROC analyses, that an average mark of 58.5% for the four main B. Commerce subjects would ensure (based on a 93% AUC accuracy level) that a B. Accounting conversion student meets the B. Accounting Honours admission requirements at the first attempt. If this average mark is lifted to 61.5% for the four main B. Commerce subjects, this in turn would ensure (based on an 89% AUC accuracy level) that the B. Accounting Honours degree is obtained in the minimum amount of time.

Considering the poor success rate of the B. Accounting conversion students, it was deemed valuable to reconsider the conversion year admission requirements for prospective B. Accounting conversion students. Based on this study, it is therefore recommended that the conversion year admission requirements should include a sub-minimum average mark for the four main subjects of 61.5% and/or a sub-minimum mark of 64.5% for Financial Accounting 389 and a sub-minimum mark of 57.5% for Management Accounting 388. This will ensure that the probability of B. Accounting conversion students wasting a year (or more) of study will be reduced.

As a secondary contribution, it was also noted that conversion students' results are not influenced by their exposure to Accounting as a subject at secondary school. After three years of study (i.e. three undergraduate years in order to obtain a B. Commerce degree) which includes an Accounting module in each of these years, students appear to have bridged the gap in their Accounting knowledge that might have been there initially upon entering tertiary education.

## REFERENCES

- Baard, R.S., Steenkamp, L.P., Frick, B.L. & Kidd, M. 2010. Factors influencing success in first-year Accounting at a South African university: The profile of a successful first-year Accounting student. *South African Journal of Accounting Research*, 24(1): 129–147. <https://doi.org/10.1080/10291954.2010.11435150>
- Baxter, P. & Kavanagh, M. 2013. Stereotypes, students' perceptions and inherent creativity: Further Australian evidence. *Australasian Accounting, Business and Finance*, 6(5): 81–100.
- Bekoe, R.A., Owusu, G.M.Y., Ofori, C.G., Essel-Anderson, A. & Welbeck, E.E. 2018. Attitudes towards Accounting and intention to major in accounting: A logistic regression analysis. *Journal of Accounting in Emerging Economies*, 8(4): 459–475. <https://doi.org/10.1108/JAEE-01-2018-0006>
- Bosua, W.S. & Van der Nest, D.P. 2015. The effect of prior knowledge and academic performance on success in first-year university Accounting. *Journal for New Generation Sciences*, 13(3): 17–33.
- Byrne, M. & Willis, P. 2003. Decline in the number of students taking leaving certificate Accounting: Teachers' perspectives. *The Irish Journal of Education*, 34: 3–14.
- Christopher, T. & Debreceny, R. 1993. The impact of English as a second language on the performance of accounting students. *Accounting Research Journal*. Spring, 3–7.
- Davidson, I.R. 1976. What are your chances of becoming qualified? *Accountancy*, 87(995): 104–106.
- Du Plessis, A., Müller, H. & Prinsloo, P. 2005. Determining the profile of the successful first-year accounting student. *South African Journal of Higher Education*, 19(4): 684–698. <https://doi.org/10.4314/sajhe.v19i4.25656>
- Eskew, R.K. & Faley, R.H. 1988. Some determinants of student performance in the first College-level Financial Accounting. *The Accounting Review*, LXV II(1): 137–147.
- Farley, A.A. & Ramsay, A.L. 1988. Student performance in first year tertiary accounting courses and its relationship to secondary accounting education. *Accounting and Finance*, 129–144. <https://doi.org/10.1111/j.1467-629X.1988.tb00091.x>

- Gammie, E., Paver, B., Gammie, B. & Duncan, F. 2003. Gender differences in accounting education: An undergraduate exploration. *Accounting Education*, 12(2): 177–196. <https://doi.org/10.1080/0963928032000091765>
- Gul, F.A. & Fong, S.C.C. 1993. Predicting success for introductory accounting students: some further Hong Kong experience. *Accounting Education*, 2(1): 33–42. <https://doi.org/10.1080/09639289300000003>
- Hartnett, N., Römcke, J. & Yap, C. 2004. Student performance in tertiary-level accounting: An international student focus. *Accounting and Finance*, 44(2): 163–185. <https://doi.org/10.1111/j.1467-629X.2004.00104.x>
- Jackling, B. & Calero, C. 2006. Influences on undergraduate students' intentions to become qualified accountants: Evidence from Australia. *Accounting Education: An International Journal*, 15(4): 419–438. <https://doi.org/10.1080/09639280601011115>
- Jackling, B. & Keneley, M. 2009. Influences on the supply of accounting graduates in Australia: A focus on international students. *Accounting & Finance*, 49(1): 141–159. <https://doi.org/10.1111/j.1467-629X.2008.00273.x>
- Jonker, C. 2020. Oorbrugingsjaar. E-mail to M. Rossouw, 14 October. Available E-mail: Carli.Jonker@wits.ac.za.
- Keef, S. & Hooper, K.C. 1991. Prior accounting education and performance in a first-level university course in New Zealand. *Accounting and Finance*, 31: 85–92. <https://doi.org/10.1111/j.1467-629X.1991.tb00256.x>
- Khomsiyah, A.K. & Lindrianasari, L. 2017. The influence of accounting education on the prospects of becoming a member of the chartered accountant profession: Opportunities, challenges and expectations of Indonesia towards ASEAN economic community. *International Journal of Monetary Economics and Finance*, 10(3/4): 257–269. <https://doi.org/10.1504/IJMEF.2017.087482>
- Lubbe, I. 2017. Challenges for curriculum design: Considerations for a four-year business and accounting degree in South Africa. *South African Journal of Accounting Research*, 31(1): 60–82. <https://doi.org/10.1080/10291954.2015.1122285>
- Müller, H., Prinsloo, P. & Du Plessis, A. 2007. Validating the profile of a successful first-year accounting student. *Meditari Accountancy Research*, 15(1): 19–33. <https://doi.org/10.1108/10222529200700002>
- Nelson Mandela University 2020. *Postgraduate Diploma in Accountancy*. Available at: <https://www.mandela.ac.za/Study-at-Mandela/Discovery/Qualification-details?appqual=PX&qual=40710&faculty=1400&ot=A1&cid=469> [Accessed 14 October 2020].
- Oberholster, J. 2020. Oorbrugingsjaar. E-mail to S.M. Brink, 13 October. Available E-mail: johan.oberholster@up.ac.za.
- Oosthuizen, A. & Eiselen, R. 2012. Factors associated with success in first-year accounting after the implementation of the National Senior Certificate. *Acta Academica*, 44(3): 156–174.
- Owusu, G.M.Y., Obeng, V.A., Ofori, C.G., Kwakye, T.O. & Bekoe, R.A. 2018. What explains students' intentions to pursue a certified professional accountancy qualification? *Meditari Accountancy Research*, 26(2): 284–304. <https://doi.org/10.1108/MEDAR-06-2016-0065>

- Papageorgiou, E. & Townsend, P. 2014. Does lecture attendance matter? The good, the bad and the ugly. *South African Journal of Higher Education*, 28(5): 1625–1642. <https://doi.org/10.20853/28-5-409>
- Papageorgiou, K. & Halabi, A.K. 2014. Factors contributing toward student performance in a distance education accounting degree. *Meditari Accounting Research*, 22(2): 211–223. <https://doi.org/10.1108/MEDAR-08-2013-0032>
- Papageorgiou, E. 2017. Accounting student's profile versus academic performance: A five-year analysis. *South African Journal of Higher Education*, 31(3): 209–229. <https://doi.org/10.20853/31-3-1064>
- Rankin, M., Silvester, M., Vallely, M. & Wyatt, A. 2003. An analysis of the implication of diversity for students' first level accounting performance. *Accounting and Finance*, 43: 365–393. <https://doi.org/10.1111/j.1467-629x.2003.00096.x>
- Rhode, F.H. & Kavanagh, M. 1996. Performance in first-year university accounting: Quantifying the advantage of secondary school accounting. *Accounting and Finance*, 36: 275–285. <https://doi.org/10.1111/j.1467-629X.1996.tb00311.x>
- Rossouw, M. & Brink, S.M. 2020. An investigation into the success rates of students with no prior accounting knowledge in obtaining a professional Accounting degree. *South African Journal of Higher Education*. 35(2).
- Rowlands, J.E. 1988. The effect of secondary school accounting study on school performance in the first year university financial accounting course. *De Ratione*, 2(2): 17–21. <https://doi.org/10.1080/10108270.1988.11434999>
- SAICA 2019. *Initial test of competence: January 2020*. Available at: [https://www.saica.co.za/Portals/0/documents/Part\\_I\\_ITC\\_Jan\\_2020\\_Final\\_Stats\\_\\_Firms\\_\\_.pdf](https://www.saica.co.za/Portals/0/documents/Part_I_ITC_Jan_2020_Final_Stats__Firms__.pdf) [Accessed 7 October 2020].
- Schroeder, N.W. 1986. Previous accounting education and college-level accounting exam performance. *Issues in Accounting Education*, 1(1): 37–47.
- Stellenbosch School of Accountancy. 2019. *Bachelor of Accounting Honours admissions 2019*. Available at: <http://www.sun.ac.za/english/faculty/economy/accounting/Documents/BAccHons%20Admission%20Requirements%202019.pdf> [Accessed 23 May 2019]
- Stellenbosch University Faculty of Economic and Management Sciences. 2019. *Undergraduate programmes for 2018/2019*. Available at: [http://www.sun.ac.za/english/faculty/economy/Documents/Faculty\\_brochure\\_2018-2019\\_July2018.pdf](http://www.sun.ac.za/english/faculty/economy/Documents/Faculty_brochure_2018-2019_July2018.pdf) [Accessed 21 May 2019]
- Sugahara, S., Hiramatsu, K. & Boland, G. 2009. The factors influencing accounting school students' career intention to become a Certified Public Accountant in Japan. *Asian Review of Accounting*, 17(1): 5–22. <https://doi.org/10.1108/13217340910956487>
- Tan, L.M. & Laswad, F. 2006. Students' beliefs, attitudes and intentions to major in accounting. *Accounting Education: An International Journal*, 15(2): 167–187. <https://doi.org/10.1080/09639280600787194>
- Tang, L.C. & Seng, C. 2016. Factors influence students' choice of accounting major in Cambodian universities. *Asian Review of Accounting*, 24(2): 231-251. <https://doi.org/10.1108/ARA-04-2014-0049>

Uyar, A. & Güngörmüş, A.H. 2011. Factors associated with student performance in Financial Accounting courses. *European Journal of Economics and Political Studies*, 4(2): 139–153.

Van Rensburg, P., Penn, G. & Haiden, M. 1998. A note on the effect of secondary school accounting study on university accounting performance. *South African Journal of Accounting Research*, 12(1): 93–98. <https://doi.org/10.1080/10291954.1998.11435081>

Viviers, H. 2020. "Bridging" from under graduated accountancy-related degrees to PGDip (old "CTA"). E-mail to S.M. Brink, 7 October. Available E-mail: Herman.Viviers@nwu.ac.za.

Wen, L., Hao, Q. & Bu, D. 2015. Understanding the intentions of accounting students in China to pursue certified public accountant designation. *Accounting Education*, 24(4): 341–359. <https://doi.org/10.1080/09639284.2015.1051561>

Yee Lee, D.S. 1999. Strength in high school Accounting qualification and student performance in university-level introductory Accounting courses in Hong Kong. *Journal of Education and Business*, 74(5): 301–306. <https://doi.org/10.1080/08832329909601702>