

**SECONDARY SCHOOL ACCOUNTING AND ACCOUNTING AT UNIVERSITY**  
**(WITH PARTICULAR REFERENCE TO AN EVALUATION OF THE RELEVANCE**  
**OF SECONDARY SCHOOL ACCOUNTING IN NATAL TO THE FIRST YEAR**  
**ACCOUNTING COURSE AT THE UNIVERSITY OF NATAL, DURBAN)**

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BY

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**T.W.HALL**

**ABSTRACT**

This dissertation examines the teaching of Accounting in secondary schools under the auspices of the Natal Education Department (NED) and the influence that exposure to Accounting at high school then has on the performance of students in the first year Accounting course at the University of Natal (Durban).

Teaching and examining methods in Accounting in Natal high schools have undergone notable revision since the introduction of the current Standard 10 syllabus in 1987. The nature of the revised methodology is assessed through surveys of the opinions of those individuals with a direct involvement in high school Accounting i.e. school pupils, prospective university students, the NED Subject Committee, school Accounting teachers, university lecturers and accountants in public practice.

The major findings were that a significant majority of university students believed that previous exposure to the subject at high school level was a distinct advantage

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in Accounting I, while a significant majority of students who had not undertaken the subject up to matric level believed, in retrospect, that they should have done so. A number of universities are aware of the advantage enjoyed by students with previous exposure to the subject and have constructed their first year Accounting courses accordingly. The University of Natal, however, continues to treat its Accounting I group as a homogeneous unit, the implications of which are covered in the study.

Data was collected over a three year period (1988 to 1990) in order to compare the performance of the two groups of students in Accounting I i.e. those with matric Accounting and those without. The statistical analysis revealed that students without matric Accounting have:

- \* significantly higher drop-out rates (and drop-outs from this group were of relatively high academic ability)
- \* significantly lower pass rates
- \* significantly lower Accounting I marks, despite the fact that there is no apparent difference in the academic ability of the two groups of students.

Whilst the study has focused on the relevance of high school Accounting towards further study at university, the point is made that the high school Accounting course needs to cater also for a majority of pupils who will choose alternative career options.

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I further declare that the whole thesis, unless specifically indicated to the contrary in the text, is my own original work.

**TREVOR HALL**

**January 1992**

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# CHAPTER 1

## INTRODUCTION

### 1.1 BACKGROUND

It is doubtful whether any school subject has caused as much controversy as to its educational relevance as has Accounting. The debate is invariably centred on the major issue as to whether or not school Accounting is a form of vocational training, and whether or not vocational training has a place in secondary school education. Another part of the debate is whether or not Accounting, as a high school subject, has a contribution to make to a pupil's general education. Following the publication of the recommendations in the Walters Report, the issue of vocational training is one which is receiving increased attention by educators in their efforts to develop an education system of relevance to the needs of South Africa as a whole.

The purpose of this dissertation is to examine one aspect of this debate, that is the relevance of school Accounting to further study of Accounting at university level. It is a question that generates a great deal of emotive response from a variety of individuals. This response is often based on personal opinion and misconceptions of high school Accounting and, as a result, some myths persist.

There are some who hold the view that the prospective university Accounting student has no need to undertake the subject at school level. This claim is one which will

receive attention in this study as it has tended to cast doubt on the role of Accounting in the secondary school curriculum.

Furthermore, there is a danger in the inference that, because certain educators have reservations as to the relevance of school Accounting towards further study at university level, similar reservations would exist as to the relevance of the subject to the pupil who might wish to follow a career in a field other than Accounting.

In the school situation, one often hears the myths surrounding high school Accounting perpetuated through comments from educational authorities and others along the following lines:

- \* "The subject can always be studied when one leaves school"
- \* "Accounting does not extend the bright pupil and has little educational merit at school level as the subject does not require the pupil to exercise the higher levels of his/her intellect"
- \* "One should not train pupils vocationally at school level"
- \* "The universities prefer their students not to have studied Accounting at school".

On the other hand, one also hears the opposing arguments in the school situation. Examples are:

- \* "If you do not study the subject at school, you will experience difficulty in Accounting at university"
- \* "The subject has changed for the better in recent years and now provides a challenge for the brighter pupil"
- \* "The subject will be of relevance to a pupil in any future career"
- \* "Some universities require students who have not undertaken Accounting at school to take a bridging course in Accounting".

Freeman examined the commonly held standpoints such as: "the major objective of the high school bookkeeping (sic) course is to train and prepare bookkeepers" and "the major emphasis in the elementary course must be on the mechanics of recording transactions". He adds that, although the objectives of the course are no longer what they used to be, "nevertheless, some of the old myths and misconceptions about the elementary high school course still persist". (Freeman, 1970, 27-28).

The topic of secondary school Accounting is one which has received a great deal of attention in other countries, particularly the USA, the UK and Australia. It is evident that educational structures and conditions vary considerably between countries and it would therefore be naive to assume that the same findings would apply to South Africa and particularly the Natal situation.

A number of authorities at various leading universities within South Africa have also devoted attention to the

performance of Accounting students with previous exposure to the subject at high school level, in comparison to the performance of those students without previous exposure. To date, however, there has been no in-depth investigation in this area at the University of Natal. It will be seen that conditions may vary considerably between the provinces in the teaching of university and high school Accounting and, indeed, they may vary considerably from one school to another. It will therefore not be possible to assume that the findings in other provinces will apply to Natal as well, or vice-versa.

Certain studies in other countries, such as those by Bergin (1983) and Baldwin and Howe (1982) as well as those in other provinces within South Africa, of which Rowlands' study (1988) is the most significant, have tended to suggest that, by the end of the first year university Accounting course, there is no significant difference in the performance of the two groups of students undertaking the first-year university Accounting course i.e. those with previous exposure to the subject at high school level and those without previous exposure.

However, an issue which has not been conclusively covered by these studies is that of the student who withdraws from the course or de-registers prior to the year-end examination. Such students are normally referred to colloquially as "drop-outs", and this term will be used throughout this study. The methods of statistical analysis used in many of these previous studies have necessitated the comparison of the year-end results of those students

who survived the first year university Accounting course sufficiently well to be in a position to write the year-end paper. Although drop-out rates are mentioned in passing, the previous studies have tended to focus on those students who did not drop out of the course during the year.

It will be a contention of this dissertation that performance of the drop-out student is a central issue in assessing the relevance or otherwise of high school Accounting. Doubt has also been cast on various studies overseas for not taking into account the length of the previous exposure at secondary school level. A great deal of circumspection should therefore be applied before relating the findings of other studies to the Natal situation as analysed in this study.

The so-called myths or misconceptions about high school Accounting are particularly noticeable in schools at the time of the year when Standard 7 pupils are required to make their choice of subject packages for matric purposes.

The Natal Education Department (NED) shares with other education departments in South Africa the objective of a general formative education for high school pupils. At present, high schools expose their pupils to a wide variety of subjects at Standard 6 and 7 level. Towards the end of their Standard 7 year, pupils are required to select six subjects for further study in Standard 8 to 10, based on individual interests and strengths. In order to qualify for

university entrance, a pupil is required to attain matriculation exemption in terms of requirements stipulated by the Joint Matriculation Board (JMB).

The selection of subjects must be done within certain constraints. For example, in order to achieve a matriculation exemption, a pupil must obtain 40% at Higher Grade in first language, 33% at Higher Grade in second language, and Higher Grade passes of 40% in two further subjects which must lie in separate groups as classified by the JMB. A technicality affecting Accounting pupils is that if Accounting is to be counted as a matric exemption course, then a pass in Mathematics at either Higher or Standard Grade is required. Further JMB requirements for all pupils are also stipulated regarding the overall aggregate.

Theoretically, attainment of matriculation exemption qualifies a pupil for university entrance. However, in recent times universities have found it necessary to restrict student intake even further. Faced with the problem of limited funds from government sources, universities have become concerned with the optimal usage of those funds. A major consideration in this regard has been the student who obtains matriculation exemption and who then proceeds to achieve little academic success at university level.

Universities in South Africa have therefore generally accepted the points system as the means whereby students are screened for entrance into particular courses. The

points system involves the awarding of certain number of points to the symbols achieved by the pupil in each subject in the Senior Certificate examination. For example, in order to be allowed to register for the B.Com. degree at the University of Natal (Durban) in 1990, a student was required to achieve 34 matric points. These points could be achieved by a student who, for example, obtains five C-symbols (between 60% and 69%) and one E symbol (between 40% and 49%) in six subjects written at Higher Grade in the Senior Certificate examination. The structure of this points system, as applied at the University of Natal, is discussed further in Chapter 10.

The attainment of matriculation exemption therefore no longer serves as an assurance that a student will gain entry to the university course of his or her choice. It has become of paramount importance to a school pupil to achieve the best matric results possible in order to be reasonably assured of gaining entry into his or her first-choice university course.

Despite the fact that the high school courses are structured within the ambit of broad, general education, the course selection is one which could conceivably affect the future career options open to matriculants. What is disturbing is that some Standard 7 pupils may be making choices of matric courses based on the unfounded opinions of others and, as a result, may be influenced into subject packages totally unsuited to them. The consequences of this are that some pupils are either not able to achieve

matriculation exemption or cannot achieve sufficiently high points to gain admittance to their first-choice course at university level.

The myths surrounding high school Accounting will receive repeated investigation throughout this dissertation in the hope that their identification will assist in providing a basis on which well-informed decisions can be made. A study of the issue of high school Accounting in Natal schools is vitally necessary in the light of the implications that it holds for the several groups of individuals with vested interests. Studies conducted elsewhere cannot simply be held to be true in the Natal context.

The level of performance of students in Accounting I at university is a consequence of a number of interacting factors. The aptitude of the student, numerical or mathematical skill, the student's degree of diligence and self-discipline, the quality of teaching received at high school, socio-economic background, sporting commitments, and career expectations are some factors which can have an important influence on a student's achievement in Accounting I.

This study, however, investigates one factor in particular - the influence of previous exposure to Accounting at high school level. The question will be investigated as to whether or not variations in performance can be attributed to this factor at a high level of significance.

## 1.2 OBJECTIVES OF THIS STUDY

The broad groups of individuals with a direct involvement in school Accounting are identified as:

1. school pupils
2. prospective university Accounting students
3. NED Subject Committee for Accounting
4. school Accounting teachers
5. university lecturers
6. accountants in public practice.

The objectives of this study may be summarised as follows:

1. to identify the perceptions of school Accounting held by each of the above-mentioned groups
2. to identify the specific nature of school Accounting teaching in Natal
3. to compare the Accounting I results of those students who had undertaken Accounting as a matric subject to the Accounting I results of those students who had not undertaken Accounting as a matric subject
4. to provide documented information against which research in other provinces and at other universities can be compared
5. to guide individuals concerned with the teaching of Accounting at high school level in their decision-making.

As far as assistance in decision-making is concerned, it is hoped that the dissertation will be of value to university

lecturers in identifying the problems experienced by students in Accounting, and will alert university students to the potential pitfalls they might face in their first year at university. In the high school context, it is hoped that the findings will assist school management and guidance counsellors in making informed recommendations to pupils with regard to their choice of subject package for matric purposes and that the comments from university authorities will assist high school Accounting teachers in identifying teaching approaches and techniques that will be of benefit to their pupils. It is also hoped that the study will be of value to members of the Accounting profession, particularly those Training Officers entrusted with staff development programmes in their firms.

### 1.3 SCOPE AND LIMITS OF THE STUDY

The main focus of the study covers the performance of Accounting students at the University of Natal (Durban) over the years 1988 to 1990. The significance of these dates is that the present Standard 10 syllabus was introduced in 1987. Scholtz and Joubert (1985, 190) concluded in their paper that "matric mathematics is a much better indicator of success in Accounting at the University of the OFS (Orange Free State)", but acknowledged in a subsequent reply to correspondence from a reader of *Accountancy SA* (1985, 303) that "the latest syllabus implemented at Standard 7 level from 1984 is a vast improvement on the one previously used....the products of this syllabus will only reach universities in 1988".

The vast majority of first-year university students in 1988 would have been products of the new standard 7 syllabus implemented in 1984 and the matric syllabus of 1987. The study has been extended over three years in order to ascertain the major trends with a reasonable degree of certainty.

The scope of the study is summarised as follows:

- 1.3.1 The survey of school pupils is restricted to Natal schools whose pupils obtain matriculation exemption through the Natal Education Department (NED).
- 1.3.2 The survey of university Accounting students and the comparison of marks is restricted to Accounting I students at the University of Natal (Durban), from 1988 to 1990, with special emphasis on those students who had obtained matriculation exemption through the NED.
- 1.3.3 The survey of the Subject Committee is limited to the committee serving under the auspices of the NED.
- 1.3.4 The survey of Accounting teachers is limited to those in Natal whose pupils obtain matriculation exemption under the NED.
- 1.3.5 The survey of university lecturers will cover representatives from each of the major South African universities in order to provide a comparison for conditions at the University of Natal (Durban).

- 1.3.6 The survey of accountants in public practice is restricted to the Accounting firms in the greater Durban area.

The reason for the restriction of the study to the Natal region is that the teaching of Accounting in Natal schools has, since the introduction of the present syllabus in Standards 6 and 7 in 1984, undergone significant change. This change has been implemented in each standard on an annual basis, with the present Standard 10 syllabus having been implemented in 1987.

This development is evidenced through the recommendations issued by the syllabus committee to Accounting teachers in Natal since 1984, and the content of the NED Senior Certificate Accounting examination papers since 1987. It is difficult to assess whether the introduction of the present syllabus has led to any changes in the teaching of Accounting by other education departments.

It is therefore anticipated that the performance levels of university students who are products of the NED system could differ significantly from those of other provinces or departments. Similarly, approaches to the teaching of Accounting tend to vary considerably from university to university.

In order that the results of the study be meaningfully interpreted, the study has therefore been restricted to NED pupils who proceed to the University of Natal (Durban).

#### 1.4 RESEARCH METHODOLOGY

The research for this study comprised the following:

1. An analysis of previous literature relevant to the topic.
2. An analysis of questionnaires sent to the groups of individuals with a direct involvement in school Accounting and/or the first-level university Accounting course, as identified in 1.2 above.
3. A simple arithmetical analysis of Accounting I results covering all students registered for the course over the years 1988 to 1990. This analysis was done:
  - (a) for the student group as a whole, and
  - (b) for the differing levels of student ability as reflected by the matric points achieved by students, as this is the basis on which the university entrance requirements have been formulated.
4. A statistical analysis of Accounting I results over the years 1988 to 1990, using regression analysis and unpaired T-tests.

#### 1.5 ORGANISATION OF CHAPTERS

The following chapter is a review of previous literature on the topic relevant to this study. The extent of common ground between the university Accounting I syllabus and the school Accounting syllabus is examined in Chapter 3, in order to identify the potential advantage that could be

held by students who had previously studied Accounting up to matric level. Chapters 4 to 9 cover the responses to questionnaires sent to the groups of individuals with specific interests in school and/or university Accounting, in order to ascertain their opinions and to identify the conditions under which Accounting is taught in Natal high schools and at the University of Natal (Durban).

The main thrust of the study is the statistical analysis of results achieved by first-year university Accounting students over the period 1988 to 1990. Chapter 10 covers the analysis of drop-out rates, pass rates and average marks achieved, and reports on the statistical testing of the Accounting I results, comprising regression analysis and unpaired T-testing.

The composition and progress of the 1991 Post-graduate Diploma in Accounting student group is covered in Chapter 11 in order to ascertain the relevance of school Accounting to later stages of study towards the C.A. qualification.

Chapter 12 concludes the study by highlighting the salient points arising from the study, their applicability to other education departments in South Africa, and their possible implications for future decision-making by the relevant authorities.

## CHAPTER 2

### PREVIOUS RESEARCH RELEVANT TO THIS STUDY

After studying the existing literature, the conclusion reached was that there appears to have been much research on the topic of the first level university Accounting course, but that results of the research often appear to be conflicting, and the applicability of these studies to the Natal situation needs to be carefully considered.

A brief summary of existing literature is provided below.

#### 2.1 LITERATURE AND STUDIES IN SOUTH AFRICA

Perhaps the most significant research in South Africa has been conducted by Rowlands at Rhodes University over the period 1985 to 1987. Following his dissertation, "The Effect of Secondary School Accounting Study on Student Performance in the First Year University Financial Accounting Course", he recognised that the study of Accounting at high school level has become "an ever more viable option for brighter school pupils in recent years" (Rowlands, 1988 (b), 17).

His study concludes that students with previous exposure (PE) to Accounting at school level tend to perform better than their counterparts with no previous exposure (NPE) in the early parts of the Accounting I course, but "that

this advantage declines over the year to the extent that by the year-end examinations the two groups reveal no significant differences in their final examination scores" (Rowlands, 1988 (b), 21). In his study Rowlands states that "the fact that the November examinations reveal no significant difference between the two groups is ..... one of the reasons why it is widely believed ..... that PE students have no real advantage" (Rowlands, 1988 (a), 96). His opinion is that behavioural patterns are the cause of the similarity of marks between the two groups in the year-end examinations. PE students tend to be able to cope well in the early parts of the course owing to their previous knowledge, and therefore tend to develop poor study habits before the more demanding topics of the course are introduced.

Conversely, the difficulties experienced by NPE students early in the course motivate them to develop sound study procedures. Rowlands maintains that the early advantage of PE students should be appreciated by those structuring the Accounting I course as failure to do so could result in potentially good students either not achieving their potential owing to poor study techniques or being lost to other disciplines through "a lack of stimulation in the academic sense during the first few months at university" (Rowlands, 1988 (b), 21). Rowlands believes that it is essential that course structure take the differing backgrounds of students into account as they do not constitute a homogeneous unit, and he outlines several strategies.

There are several differences between Rowlands' study and this dissertation which could be expected to result in different conclusions being reached with regard to the

relative performance of the two groups of students in Accounting I. These are discussed below.

### **The "old" school syllabus**

Rowlands' study covered Accounting I students over the years 1985 to 1987. The Accounting I students of those years would have not have been exposed to the new syllabus, introduced at Standard 6 and 7 level in 1984. Matriculants of 1987 would have been the first school pupils to have undertaken the new syllabus.

There is widespread recognition that the new syllabus is a vast improvement over the previous one. The main criticism of the old syllabus was that there was too much emphasis on procedural, bookkeeping aspects of the subject and this was evidenced through the topics examined by the provincial senior certificate examinations. The matric syllabus of 1987, moreover, was the first to include Company financial reporting as a significant part of the syllabus, a topic which forms the basis of university curricula. It is therefore reasonable to assume that high school Accounting pupils from 1987 onwards would be far better prepared to cope with the demands of the university curriculum. This consideration is further discussed in Chapter 3. Had Rowlands' study been conducted after 1987, he might well have reached a different conclusion with regard to the ultimate year-end performance of PE students as opposed to NPE students at Rhodes University.

The improvements in the new school syllabus have been recognised by certain university authorities. In 1985, Scholtz and Joubert of the University of the Orange Free

State wrote that although matric Mathematics was a better predictor of success in Accounting I at their university (at that stage) than was matric Accounting, they nevertheless acknowledged that the Accounting syllabus introduced at Standard 7 level in 1984 "is a vast improvement over the one previously used ..... the products of this new syllabus will only reach universities in 1988" (Scholtz and Joubert, 1985, 303).

**The approach followed by high school teachers of Accounting in Natal**

The Accounting Subject Committee of the Natal Education Department has made it a priority since 1987 to assess teaching and examining methods in the subject and constantly to update teachers in these areas. They have been acutely aware that, although the 1987 matric syllabus was a vast improvement, any stagnation of teaching methods would negate the progress made in the development of the school syllabus.

Johns, in his article in 1984 titled "Wits does not 'recognise' School Accountancy : Fact or Fiction?" outlined an opinion on the relevance of school Accounting which concurs with the "under-achievement" factor found by other researchers with regard to students with previous exposure to Accounting. Dickinson (1985) has also covered the under-achievement of students who have previously studied Accounting at school level, as experienced at the University of the Witwatersrand.

Johns stated that "it is now up to the teachers, and especially the planners and examiners, to lay the sort of open-minded, reasoning foundation which will be of most

benefit to their pupils on arrival at WITS. Unfortunately, the matric HG examination papers, on the whole, are not yet measuring these values" (Johns, 1984, 3).

The Accounting Subject Committee of the Natal Education Department has taken cognisance of such criticism and has taken steps accordingly, through the issuing of extensive guidelines to teachers, followed by a change in emphasis in the Natal Senior Certificate Accounting examination. The committee has been alert to the effect that the matric examination paper has on teaching methods and since 1987 there has been a widely recognised difference in the style of the Natal papers in comparison to those of other provinces. This is discussed in greater depth in Chapter 6.

The Natal approach has been summarised by Hall in his two papers presented to Accounting teachers in Natal at annual seminars. The papers cover the topic, "The 'Thinking' Approach in the Teaching of Accounting to School Pupils at the Higher Grade". In these papers Hall provides advice on the teaching of high school Accounting within the ambit of the existing syllabus. He urges teachers to re-examine their teaching and examining methods with particular reference to the inclusion of a conceptual framework in the teaching of procedural aspects of the syllabus. He also urges teachers to become less textbook-bound and to instil an analytical and critical approach in pupils that will be of benefit to them in the furtherance of their studies at university level.

This advice is shared by Pfaff in an article written in New Jersey, USA, as early as 1970. He refers to general educational aims and methodology in the teaching of Accounting. Pfaff identifies the basic purpose of the high school course as "to enhance the ability of a student to understand his economic environment" and to "conceptualise the terminology found on financial statements". He suggests that "there is no need for students to develop expertise in the practice of bookkeeping to realize this aim. Indeed, the development of bookkeeping skills may well be antithetical to the course aims" (Pfaff, 1970, 28).

The Natal Accounting Subject Committee has also been aware of the fact that there are two groups of school pupils that must be catered for in the high school Accounting course i.e. those who will proceed to the further study of Accounting at University level and those who will not. The Subject Committee has therefore been aware that the subject cannot be taught and examined along narrow, procedural lines and their advice to teachers has been along the lines of encouraging them to teach the subject in a wide context, with relevance to whichever career a pupil may eventually follow.

To date, there has been little evidence of a similar approach being followed in the other provinces, leading to the conclusion that the teaching of Accounting in Natal is conducted along unique lines in comparison to the other provincial departments.

Rowlands stated (1988 (b), 18) that "while it is recognised that the provincial and JMB examinations may also differ slightly in standard, for the purposes of

this study, a uniform standard was assumed". While this point was valid at that time, it does bring into question the relevance of Rowlands' conclusions to the teaching of Accounting in Natal schools under the syllabus which is currently applicable.

The differing standards were evidenced in 1987 by Mitchell and Fridjohn. They concluded that "analysis of first-year university performance in relation to the matriculation mark at school shows that the difference between the two marks varies according to the type of matriculation examination written .... the Joint Matriculation Board and Indian Senior Certificate examinations produce students better equipped for university study than do the Transvaal Senior Certificate and, in some circumstances, the Natal Senior Certificate examinations" (1987, 555).

It must be noted that although the study by Mitchell and Fridjohn is not directly relevant to this dissertation, the point is taken that there are differences between education departments. The study mentioned above covered overall matric aggregate compared to university performance and did not investigate individual subjects. Also the application of JMB norms to the provincial senior certificate results would have an effect on matric results.

The approach followed in Natal in the teaching of Accounting is further covered in Chapters 6 and 7.

### **Treatment of "drop-outs"**

Rowlands advises that further research should be conducted in respect of students who drop out of the Accounting I course prior to the year-end examination. In his comparison of the Accounting I results of PE and NPE students, Rowlands ignored drop-outs because of the impossibility of determining the reasons for drop-out. Rowlands refers to Baldwin and Howe's study (1982) where it is claimed that drop-out rates were similar for the two groups of students, but that PE students tend to drop out later in the course. Rowlands, however, does state that "had drop-outs been included in this study, in so far as they wrote tests or examinations, it is probable that the relative disadvantage of NPE students would have been accentuated" (1988 (b), 20). It was obvious to Rowlands that fewer PE students dropped out of the course at Rhodes University. He supports the contention that "most students drop out of the Accounting I course due to inability to cope with the course and therefore that the majority of drop-out students would achieve poor results in tests and examinations" (1988 (a), 84).

In a statistical analysis of marks, a problem is encountered as to the magnitude of the mark to be allocated to a drop-out.

In this study on the performance of University of Natal (Durban) students, it is contended that to ignore drop-outs could result in misleading conclusions. The drop-out rate is a factor which has an important bearing on the assessment of the relative performance of the two subgroups of Accounting I students.

In Chapter 10, in the calculation of simple averages of marks achieved by students, a mark of 0% was therefore allocated to students who do not write the year-end examination. Whilst there could well be arguments against this decision, in the opinion of the researcher, the information provided would be more relevant than that which merely excludes drop-outs.

However, in the statistical analysis of marks using regression analysis and Unpaired T-testing, the treatment of drop-outs was a problem which could be overcome only through their exclusion. The awarding of a mark of 0% to these students would cast doubt on the correlations revealed by these tests. Consequently, in interpreting results, it should be remembered that, had drop-outs been included in the data for this aspect of the study, the relative difference in performance between the two groups of students would have been greater.

#### **Differences in the composition and character of the Accounting I student group**

Over the three years of Rowlands' study at Rhodes University (1985 to 1987), it was found that PE students constituted about 40% of the Accounting I group.

In compiling statistics at the University of Natal (Durban) over the years 1988 to 1990, it was found that although there was a 50%-50% division at the start of the 1988 academic year, by 1990 the composition of the group had altered to 75% with previous exposure as opposed to 25% without previous exposure. Possible reasons for this are covered in Chapter 10. The difference is further

accentuated if one were to consider the numbers of students after allowing for drop-outs.

It is contended on page 25 that the difference in the composition of the Accounting I student group at the University of Natal (Durban) could have an effect on the results obtained from this study, in comparison to Rowlands' findings on the year-end marks achieved by PE and NPE students.

Rowlands considered the difference in ability between the two groups of students and quoted Bergen in that "some educators believe that students who studied Accounting in high school are low achievers". He also states that "it has been the writer's experience that similar views are held by some educators in this country" (Rowlands, 1988 (b), 18).

Rowlands also commented on the current situation (1987) and notes that a change is occurring. He states that "Accounting studies at secondary level, once regarded as a subject which only the less gifted should consider, have become an ever more viable option for brighter school pupils in recent years" (1988 (b) 17). He points out that Bergin has noticed a similar trend in the USA.

Rowlands statistically investigated the comparative levels of academic ability of the two groups of students, using matriculation results as a basis. He found (1988 (b), 19) that "no significant differences in abilities existed between the two groups of students, except in 1986" when the ability of NPE students proved to be greater.

The composition of the Accounting I group is a factor which could have a significant influence on the statistics obtained at the University of Natal (Durban). The effect of the new subject packages in Natal schools at Standard 8 level in 1986 has had the effect of attracting a better academic quality of pupil to the subject at high school level. This factor, together with the updated approach to the teaching of Accounting in Natal schools, has had the effect of providing the University with a reservoir of Accounting matriculants who are better prepared for entry into the Accounting I course and hence less likely to drop out or underachieve at first year university level than was previously the case. Despite the fact that Natal students without matric Accounting might still match the general academic prowess of the Accounting matriculants, the improved high school grounding in Accounting is likely to accentuate differences in performance between the two groups. This aspect is covered further in Chapters 6 and 7.

This study has also taken differing levels of ability into account in the analysis of drop-out rates, pass rates and average marks, by stratifying the student group into categories of matric points achieved. Whilst it is acknowledged that there could be better indicators of potential success in the Accounting I course, the points system is the one adopted by the University of Natal and has therefore formed the basis of the statistical analysis covered in Chapter 10 of this study.

#### **The relevance of Rowlands' study to this dissertation**

Rowlands' study at Rhodes University has been of significance in covering the crucial areas of debate on

the topic of high school Accounting at that time and has assisted in outlining the areas of study of this dissertation at Natal University under present conditions.

Rowlands' study confirmed the fact that "PE students enjoy an advantage vis-a-vis their NPE colleagues in the initial stages of the course and that this advantage declines over the year to the extent that by the year-end examinations the two groups reveal no significant differences in their final examination scores. It is not surprising that PE students enjoy this initial advantage" (Rowlands, 1988 (b), 21).

The early advantage factor is one which is not debated by this Natal study. University authorities now accept this almost without question (refer Chapter 8). The crucial debate still centres on the year-end result. In this respect, the Natal study under present conditions could lead to conclusions different to those of Rowlands.

Rowlands states, based on his results, that "perhaps conclusions are drawn from the final result and there is a failure to appreciate the implications of early advantage" (Rowlands, 1988 (b), 21). He goes on to outline possible strategies to university educators in the teaching of the heterogeneous Accounting I group and to School authorities in advice given on choice of subject packages at the end of the Standard 7 year.

It is hoped that the findings of the Natal study will also give some guidance for future directions.

More recently, a paper by Rowlands and Jackson (1990) reported on the responses to a questionnaire directed at the students themselves. They found that "the majority of respondents (81,1%) indicated that given the opportunity to choose their school subject packages again, they would include accounting in their subject package". Of these students, 80,7% indicated the reason would have been the advantages this would provide in the Accounting I course. The writers state that "this is a factor which members of the accounting profession would do well to consider when giving advice to those seeking career guidance" (1990, 6). They, nevertheless, believe that high school pupils should be influenced by sound educational factors in their selection of subject packages.

This article also has relevance for the Natal study in ascertaining the perceptions of school Accounting held by the Accounting I students. The findings of the Natal study are very similar and are analysed in Chapter 5.

## 2.2 LITERATURE AND STUDIES IN THE UNITED STATES OF AMERICA

There has also been research and literature in the USA which has influenced this study. This literature, however, must be assessed in the light of the changing conditions in Natal schools and differences in curriculum content of high school Accounting between South Africa and the USA. It has been acknowledged that there is a wide divergence between the content of the present and the previous South African high school Accounting syllabi, and the approach to the syllabus in Natal schools in comparison to the rest of the country.

Similarly, there appears to be as great a divergence between syllabi and approaches to teaching of the different countries. A great deal of the American literature refers to the subject as "bookkeeping" rather than "accounting". This terminology might provide clues as to the course content of the American high school Accounting syllabi at that time.

What is of significance, however, is the fact that the debate on the relevance or otherwise of high school Accounting has manifested itself in other leading countries in the Western world.

Tambrino identifies the need for attracting better students to Accounting but at the time of writing (1968) stated that "accounting has remained (for the most part) a course for college freshmen". He also identifies "the predilections many guidance counsellors and other educators hold against business education". He suggests that "...educators should discontinue viewing secondary business education as merely vocational training.." (Tambrino, 1968, 383-384).

The view that school Accounting is purely a form of vocational training has been known to be held by many educators in South African schools and Accounting teachers in this country have long attempted to rid themselves of this stigma.

Pfaff's article (1970) has been mentioned above and contains a message for South African teachers of Accounting in that the development of bookkeeping expertise should not be regarded as the realisation of the aim of the high school Accounting course.

Freeman outlined some myths and misconceptions about high school bookkeeping and suggested that "a good secondary school elementary course in accounting principles and practices is a tremendous boon to the vocational prospects of every business student". He identifies what he considers to be certain myths about high school Accounting including:

- (a) "the main objective is to train and prepare bookkeepers"
- (b) "the major emphasis is on the recording of transactions and the course does not help the student to develop the ability to solve realistic business problems"
- (c) "the course is not complete unless it covers the complete accounting cycle"
- (d) "data processing eliminates the need for teaching high school bookkeeping and accounting"
- (e) "high school accounting is of little relevance to the university accounting student"
- (f) "students can master the course through programmed instructional aids without a teacher"

(Freeman, 1970, 27-29).

Freeman, at the time of writing, felt that these myths still persisted and stated that "perhaps their identification and analysis might hasten their demise" (Freeman, 1970, 27). He suggests the ideal aims of a good high school Accounting course and ends with a quotation that is of relevance to high school Accounting teachers in South Africa even today:

"..only a good teacher can develop the right attitudes, understanding and appreciation of business practices and procedures. A good teacher comes in where the text material ends. There is not, and probably never will be, an adequate substitute for a good teacher of high school bookkeeping and accounting" (Freeman, 1970, 29).

The message is that for school Accounting to be of relevance to its students, the course objectives need to be well appreciated and revised if necessary, and that teaching and examining methods be developed accordingly.

Baldwin and Howe (1981) analysed performance of two groups of students: Group I (students who studied Accounting at school level) and Group II (students who had not). They concluded that "Overall, Group I students performed no differently on examinations than those in Group II. While they scored higher on early examinations, they scored less well later. There was no difference in drop-out, although Group I students tend to drop later in the semester" (Baldwin and Howe, 1982, 625). They also suggested reasons for their findings. A major criticism of these findings was made by Schroeder in 1986 in that the Baldwin and Howe study did not take into account the length of previous exposure to high school Accounting.

Bergin's study in 1983 received similar criticism from Schroeder. Bergin continued the analysis of the two groups of students and re-enforced the findings that, although there is a difference in early performance, there was no significant difference as to the end-of-year scores. Bergin, however, went on to state that "to say that there is no difference between the course

performance of the two groups would be misleading" and suggests that "if the under-achievement of the students who had studied accounting previously can be corrected, this study shows that the difference between the two groups may be significant" (Bergin, 1983, 27).

The findings of the studies by Bergin and by Baldwin and Howe must be seriously questioned in the light of claims by Schroeder (1985 and 1986) and made earlier by Friedlob and Cosenza (1981) that the length of study of high school Accounting is a determining factor in the subsequent success or otherwise of the university student.

Schroeder in 1986 specifically questioned the applicability of research by Bergin and by Baldwin and Howe. He states that in Bergin's research, nearly all students with HSB (high school bookkeeping) background had no more than a year's such experience. For this reason, Schroeder advises that the findings of these prior studies cannot be relied upon. Schroeder's findings were that "students with more than one year of high school coursework earned significantly high scores on all exams in the college introductory financial accounting course" (Schroeder, 1986, 37). He does, however, concede the problem of underachievement by HSB students later on and advises that this group be cautioned on the potential problems.

In 1985, Schroeder found that students with only one year of HSA (high school accounting) experience earned the same grades in Accounting at university level as the student without previous exposure. Students with two years of exposure to high school Accounting, however,

achieved significantly better grades than their counterparts. He concluded that high school Accounting coursework "may have a lasting effect on student attitudes and a short-run favourable influence on college-level accounting grades" and that "course drop-out rates....were significantly higher among students without HSA experience" (Schroeder, 1985, 211).

In 1985, Schroeder also conducted a survey of students. The findings of this survey correspond to the findings of Rowlands and Jackson (1990) and the present Natal University study. There was almost unanimity among students with at least two years' exposure to Accounting that high school Accounting was necessary as an introduction to university Accounting.

Schroeder also made the point that high school Accounting has "more points in common with college introductory courses than many college accounting instructors would suspect or readily admit" (Schroeder, 1985, 208). A comparison of the content of the school Accounting syllabus in South Africa and the Natal University curriculum, is covered in Chapter 3.

In South Africa there are no complications in respect of the length of exposure to the subject at high school level. The high school Accounting pupil will undertake school Accounting for a minimum of four years, except in a few schools where the subject is offered only from Standard 8 level. In such cases, however, teachers are required to cover the Standard 7 syllabus before proceeding with the Standard 8 coursework. In many Natal schools, the course is not offered at Standard 6 level. The Standard 6 and 7 syllabi have been provincialised

through the Subject Committee into a single year syllabus. Pupils wishing to undertake the course as a matric subject will then undertake the course for a further three years at Standard 8, 9 and 10 level. The situation appears to be different in the USA, which brings into question the relevance of some of the major USA studies.

Friedlob and Cosenza recognised some of the myths outlined earlier by Freeman i.e. that school Accounting "is often not considered to be among those courses most important or even desirable for the college-bound student to pursue. This attitude may often be fostered by college and university faculty. 'It is easier to write on a clean blackboard than a dirty one' is an analogy that is used to discourage college-oriented high school students" (Friedlob and Cosenza, 1981, 14). They conclude that this attitude is "unfortunate". Their study reinforced Schroeder's conclusion that the length of high school Accounting exposure was significant in its effect on subsequent student performance. They also undertook a study of student opinions and found that "seventy-five percent of the students surveyed in first- and second-quarter accounting principles felt that high school instruction would have been a definite help to them." (Friedlob and Cosenza, 1981, 15).

Swanson and Brooks in their study stated that "performance in the sophomore-level accounting courses was significantly better for students who completed bookkeeping in high school" and that "this study supports the broad efforts to enhance the high school bookkeeping/

accounting course as a preparation for entry into colleges of business" (Swanson and Brooks, 1986, 33).

Another study recognised that the number of school students taking bookkeeping/accounting has risen and acknowledged that "high school and previous collegiate performance, as well as specific and related academic experience, each account for a significant portion of the variance in examination performance above that explained by aptitude and effort" (Eskew and Faley, 1988, 137). They also suggest that "knowledge of students' previous exposure...may help accounting educators better structure their introductory courses" (144).

### 2.3 LITERATURE AND STUDIES IN OTHER COUNTRIES

Hutchinson and Hart in 1972 analysed first year university Accounting performance of students with and without previous exposure to high school Accounting at Melbourne and Monash Universities in Australia. They identified the problems for tertiary educational institutions teaching and streaming first year Accounting and suggested the necessity for a course which will satisfy both groups of students. This is a matter which was raised by Rowlands in his study.

Hutchinson and Hart also investigated the perceptions of first year Accounting students and concluded that those without previous exposure felt that they spent more time on Accounting, found the subject more difficult, and felt they were more disadvantaged than the students with previous exposure to the subject at secondary school

level. These findings correspond to those of Rowlands (1990) and the Natal University study.

Mitchell of the University of Edinburgh questioned the applicability to the U.K. of previous research by Bergin, Baldwin, Howe and others in the USA. His results differ from those of Bergin and others and he states that "this may indicate the effects of the significantly differing educational systems of the two countries" and that "in the U.K. the school syllabus goes beyond what may reasonably be described as pure bookkeeping" (Mitchell, 1985, 81). Similar differences may reasonably be expected between the present South African syllabus and the American syllabi at that time.

Mitchell concludes his study by stating "it can be potentially rewarding for the first level university accounting student to have taken accounting to Higher Grade at school". He also confirms that "numerical or mathematical skill may be an additional factor influencing student performance" (1985, 85).

Keef's results based on research in New Zealand in 1988, further accentuate the differences in conditions between countries. He found that "the level of previous study of accounting had no association with the performance in any part of the (first-level university accounting) course" (Keef, 1988, 293).

The major conclusion by Farley and Ramsay (1988) in their study at Monash University, Australia, was that "previous knowledge of accounting ... at secondary school does influence the performance of students in the first year of accounting at tertiary level. This statement is

supported at high levels of significance over all four years (of their study), for both marks and rankings, and for aggregates and course components (with the possible exception of the Financial Mathematics component)" (Farley and Ramsay, 1988, 42). Their results are similar to Schroeder's and confirm the belief that the length of study of Accounting at school level is important in its effect on Accounting performance at tertiary education level.

#### 2.4 COMMENT

There is much conflicting evidence worldwide on the relevance or otherwise of high school Accounting. The only definite conclusion that can be made is that educational conditions such as syllabi, length of study and teaching approaches vary from country to country, as indeed they do vary from region to region in South Africa.

The situation in Natal is one which appears to differ from the conditions experienced in the other provinces and other countries. The approach to the teaching and examining of Accounting in Natal high schools will receive attention in this study and comparisons also will be made between the revised high school and university Accounting syllabi. It should be appreciated that, owing to the conditions pertaining to Natal at the present time, the results of the above-mentioned studies and interpretations of previous researchers must be carefully evaluated and tested in the Natal context before any inferences can be made.

# CHAPTER 3

## COMPARISON OF UNIVERSITY AND SCHOOL ACCOUNTING SYLLABI

### 3.1 BACKGROUND

Scholtz and Joubert (1985 (b), 303) acknowledged that the Accounting syllabus introduced at Standard 7 level in 1984 is a vast improvement on the previous syllabus. This new syllabus was introduced in the subsequent standards on an annual basis, leading to the introduction of the present Standard 10 syllabus in 1987. There has been a further revision of the Standard 7 syllabus, which was implemented in 1991. The revised Standard 10 syllabus will therefore be implemented in 1994.

There is general consensus amongst teachers in Natal that the Standard 7 to 10 syllabi implemented over the period 1984 to 1987 are far superior to those previously in operation. This is discussed further in Chapters 6 and 7. The major differences between the current and previous syllabi are the incorporation of financial accounting for Companies and the greater scope which now exists for the introduction of an analytical and conceptual approach.

A welcome feature has been the increased flexibility in the setting of syllabi. The previous syllabi had been in existence from 1975 to 1983, hence it was not surprising that there was constant criticism of the syllabi being outdated. The previous system in the setting of syllabi involved a meeting of representatives of the syllabus

committees of the provincial education departments. This Interdepartmental Syllabus Committee was responsible for the development of the previous syllabi, which were subsequently finalised at a joint meeting of this committee with representatives of the Joint Matriculation Board (JMB).

The present system allows for annual meetings, if deemed necessary, of the newly formed Curriculum Development Committee. The Curriculum Development Committee comprises two representatives from each of the four provincial educational departments plus one representative, with observer status at present, from each of the other examining authorities e.g. House of Delegates, House of Representatives. This committee initiates new developments in existing syllabi when necessary, but its primary role is that of devising draft syllabi as the first phase in the formal revision of syllabi. Following the submission of the draft syllabi, a Joint Committee Meeting is held comprising representatives of the JMB together with one representative from each of the provincial education departments. The approved core syllabus results from this joint meeting. The approved syllabus is then distributed to the various education departments which will then be responsible for 'provincialising' the syllabus through their subject committees. It is through the 'provincialising' of the syllabus that differences in emphasis can arise between departments.

The amendment of syllabi is thus far more flexible than had been the case in the 1970's and the early 1980's. A case in

point has been the replacement of the Source and Application of Funds statement with the Cash Flow Statement following the issue of statement AC118 by the SA Institute of Chartered Accountants in 1988. Under the previously inflexible system of changing syllabi, the Source and Application of Funds Statement could possibly have been examinable many years after its disappearance from the realms of generally accepted accounting practice.

However, at present there are apparently two constraints which have the potential to hinder the successful implementation of revised syllabi.

The first of these constraints is the speed at which the provincial subject committees can disseminate new information to their teachers. Fortunately, this does not appear to be a major problem in Natal, being a relatively small province. Natal was, in fact, the first province to examine the Cash Flow Statement, in its Senior Certificate paper in 1989. Moreover, the Accounting Subject Committee of the NED has continually stressed that teachers have a responsibility to keep up to date with modern trends and to stay one step ahead of the syllabus. The ultimate achievement of this objective is, obviously, dependent on the level of commitment of the teachers themselves. An encouraging feature in Natal has been the willingness of many Accounting teachers to comply with this request.

The second constraint is that of the academic qualification of the high school Accounting teacher. It will be seen in this chapter that there is a great deal of common ground

between the Accounting syllabi at high school and university levels. The ideal situation would be for all Accounting teachers at matric level to have a number of years experience in teaching and to be in possession of a university degree in Accounting, to provide them with the necessary frames of reference and background knowledge against which future developments in the high school syllabus can be meaningfully interpreted, understood and communicated.

However, the lure of higher salaries in the commercial field has resulted in the loss of a number of experienced and well-qualified teachers. First-year teachers, some without university qualification, have therefore been required to fill the breach. These teachers, particularly in the country schools with small Accounting departments, are often required to work in isolation without a well-qualified colleague to consult. The annual seminars and the assistance of the NED subject adviser are sometimes not sufficient to allay the fears and uncertainties of the inexperienced teacher.

As far as qualifications are concerned, teachers of high school Accounting in Natal comprise three main groups:

- (1) those in possession of a university degree (usually a B.Com.)
- (2) those in possession of a Technikon qualification
- (3) those in possession of a qualification through a Teachers' Training College.

Owing to the sensitive and confidential nature of teachers' personal qualifications, it has not been possible to obtain this information from the NED. This researcher is, nevertheless, grateful to the NED for the permission granted by them for research to be conducted in the Natal schools subject to the conditions that marks of pupils or qualifications of teachers not be released by the NED, and that no connection be made between responses of individual schools and teachers to questionnaires and to performance in any examination.

It has, therefore, not been possible to determine the extent to which teachers of Accounting at schools possess a relevant university degree in Accounting and hence to assess whether or not such teachers have the requisite background to their imparting Accounting concepts which are common to the high school and university syllabi.

### 3.2 METHODOLOGY

In order to ascertain the extent of the common ground between the high school Accounting syllabus and that of the University of Natal (Durban), the objectives of the syllabi were compared and a list was made of topics included in the university syllabus. Each topic was then assessed in the light of the school Accounting syllabus for Standards 7 to 10. The findings are discussed below, with further detail reflected in Table 3.1 in Appendix B to this dissertation (pages 184-187).

### 3.3 GENERAL CONCLUSIONS

It appears as if a significant percentage of the Accounting I coursework, as evidenced by the Course Guides for 1988 to 1990, is covered at school level over the four or five years of study up to matric level. It should, therefore, be no surprise that matric Accounting pupils outperform their counterparts in Accounting I. However, the teaching methods employed at school level and the academic qualifications of the high school Accounting teacher are vitally important in assessing the quality of the coverage of the topics at school level.

As Johns (1984, 3) stated: "...now it is up to the teachers, and especially the planners and examiners, to lay the sort of open-minded, reasoning foundation which will be of benefit to their pupils on arrival at WITS (University). Unfortunately, the matric HG examination papers, on the whole, are not yet measuring these values.."

Pfaff (1970, 28) commented: "Since the basic purpose of this high school course is to enhance the ability of a student to understand his economic environment...there is no need for students to develop expertise in the practice of bookkeeping to realize this aim. Indeed, the development of bookkeeping skills might well be antithetical to the course aims."

The Natal Education Department, through its Accounting Subject Committee has issued much advice to its teachers on methodology along these lines, within the ambit of the syllabus, and this has been reinforced through the type of

questions set in the Natal Senior Certificate examination. This is further discussed in Chapter 7. However, a perusal of matriculation examination papers reveals little apparent change in the type of paper set by the other departments up to 1990. This leads to the assumption that the teaching methodology used by teachers under the other departments has not changed significantly from that under the previous syllabus.

The high school Accounting syllabus differs from the university syllabus in that it has the potential to incorporate a wide range of sub-disciplines. The high school Accounting teacher has the latitude to cover a number of introductory topics in the fields of economics, business administration, information systems, managerial accounting and auditing, with the aim of increasing the relevance of the subject to pupils other than those who might wish to pursue a career in Accounting. On the other hand, the objectives and content of the university Accounting I course, as described in the students' guide of the University of Natal (Durban) is "confined to a description of accounting as a discipline which interprets, measures and describes economic activities" (University of Natal, 1989, 1).

In comparison to the university course, high school Accounting may therefore be regarded as potentially much broader, the limiting factor being the ingenuity, imagination and adaptability of the high school teacher.

### 3.4 COMPARISON OF OBJECTIVES OF HIGH SCHOOL AND UNIVERSITY SYLLABI

In the opinion of this researcher, the two most significant objectives of the high school Accounting syllabus are:

"To develop the logical thought processes and analytical ability of pupils so that they may be able to apply the basic principles of Accounting to new and unfamiliar situations"

and

"To develop the pupils' understanding of and adaptation to their social environment by the meaningful interpretation of accounting information which they will come across in later life" (NED, 1985, i).

The new Standard 7 syllabus, introduced in January 1991, lists another significant objective:

"To contribute to the broad general education of pupils by cultivating an understanding and appreciation of the value and importance of Accounting for personal use, as a preparation for their places in economic society and as an incentive to further study" (NED, 1991, i).

The intention, therefore, is for the high school Accounting course to be sufficiently broad to cater for the needs of all pupils who undertake the subject and to be of relevance in their personal lives as well as in their chosen careers.

Whilst the developers of the high school Accounting syllabus realise that the course content should also provide an incentive to the pupil who might wish to study further in Accounting, this objective constitutes only one part of the overall course objectives.

In order for it to be of relevance to a wide spectrum of pupils, the high school Accounting course should consequently not restrict itself to chiefly financial accounting topics, as does the university Accounting course. At school level, topics drawn from other disciplines (e.g. the establishment of a business, internal control procedures, cost accounting, alternative forms of investment) have found their way into the course, in addition to topics of a bookkeeping and a financial accounting nature.

Despite the good intentions underlying the objectives of the high school Accounting course, it is this researcher's opinion that teachers are prone to fall into the trap of adopting, above all others, the unwritten objective of covering the syllabus in the time available without reference to the stated objectives. Faced with the everyday pressures in administration, counselling, disciplining, and extra-mural duties, as well as the communication of the subject in the classroom, the pressurised teacher often tends to resort to the easiest means of teaching the subject - the textbook. This is a potential problem facing all school subjects, not only Accounting.

The problem is compounded as the Accounting textbooks on the market tend to have a similar disregard for the objectives stated in the syllabus. It has been a major problem in Natal that, to date, the textbooks available on the market communicate merely the essential bookkeeping basics with a plethora of lengthy, repetitive and unchallenging exercises. As such, over-reliance on the textbooks does not provide good preparation for pupils writing the Natal Senior Certificate Accounting examination, neither does it foster pupils' analytical and reasoning skills that are important for subsequent success in Accounting I at university.

Another factor which has an effect on the objectives in the teaching of high school Accounting is that of the academic abilities of the pupils being taught. For example, the objectives of a teacher at a school, in an upper-middle class area, which has a reputation for high academic standards might coincide with the objectives stated in the syllabus. On the other hand, the teacher of less academically inclined pupils who have no aspirations to achieve matric exemption status, might focus his or her objectives on the communication of bookkeeping skills only. Further complications arise, particularly at the smaller schools, where three grades of pupils (i.e. Higher, Standard and Lower) are placed in the same class. In such cases, the teacher might be inclined to teach to the lowest common denominator in the class. The NED Subject Committee has continuously warned teachers against this approach.

The point to be remembered is that, irrespective of the statement of objectives in the high school Accounting syllabus, these objectives may seldom be borne in mind by the average teacher. Teachers who are prepared to devote additional time in the preparation of lessons, worksheets, class projects, tests and examinations, have been rewarded with the enthusiasm of their pupils and the subsequent success achieved by their pupils in Accounting at high school and, possibly, university level.

In comparison, the aims of the Accounting I course at the University of Natal (Durban) are stated as follows:

"The aims of the course are:

- to provide you with a framework for the preparation and evaluation of financial reports based on the assumption that their primary purpose is to provide information which is useful for making economic decisions
- to explain the fundamental concepts and principles underlying accounting so that you may understand and appreciate the basis upon which financial reports are prepared, as well as their strengths and limitations" (University of Natal, 1989, 1).

The Accounting I Student's Guide also lists the specific objectives of the course and each of its modules.

In comparison to the objectives of the high school course, those of the university course appear to be more focused on financial statements and reports and the critical evaluation thereof. The Accounting I course caters for a more defined group of students than does the high school course. By the time the student enters university, a choice of career has usually been made and hence the course objectives would be expected to be focused accordingly.

### 3.5 ASSESSMENT OF AREAS OF COMMON GROUND BETWEEN HIGH SCHOOL AND UNIVERSITY SYLLABI

Despite the fact that the stated objectives of the high school and university courses differ, there are a number of topics in the high school Accounting syllabus which appear to be repeated at university level.

Module I of the Accounting I course at the University of Natal (Durban) covers the introduction and nature of Accounting. The description of Accounting, its application and purpose, and the different types of entities are topics in this module which are common to both syllabi.

Judging from the senior certificate examination papers, it appears that there are topics in Module I of the University course which receive attention in the Natal schools but not in the other provinces. These are the users of accounting information and their main decision interests, the difference between financial and management accounting, and the entity concept. The topic in this module which receives little or no attention at high school level is that of

Accounting in relation to its environment. The role of Accounting standards and Generally Accepted Accounting Practice (GAAP) are topics which are not formally mentioned in the current high school syllabus, but are covered by some teachers as background information. These topics, however, have been identified for inclusion in the new syllabus to be introduced over the period 1991 to 1994.

The Accounting Cycle forms the basis of Module 2, and this is the area where there appears to be the greatest degree of similarity between the university and high school syllabi. Financial statements and capital structures of the different types of business enterprise form the major part of both syllabi. Net income apportionment between taxation, dividends and retained income receives detailed attention at both university and high school levels, as do the accounting equation, recognition of elements of financial statements, the measuring of income, transactions with owners, the accounting period, year-end adjustments, closing transfers and reversals, the various trial balances and their limitations, the ledger, rules of debit and credit, the journal, the various groups of ledger accounts, posting and balancing, and the accounting cycle for a manual system are all topics which are covered extensively at various stages from Standards 6 to 10 as well as at university level.

Year-end procedures, including year-end adjustments, receive detailed attention at high school level. Year-end procedures of sole proprietors are covered at Standard 8

level, partnerships at Standard 9 level and companies at Standard 10 level, together with non-profit organisations.

As far as companies are concerned, the high school syllabus includes preparation and use of statutory financial statements and the cash flow statement.

Although close corporations are not included in the present high school syllabus, they have been incorporated into the new syllabus to be introduced over the period 1991 to 1994.

The preparation of financial statements of sole traders, partnerships, companies and non-profit organisations form a major part of the high school syllabus, together with the analysis and interpretation of financial statements. Ratio analysis is an area which high school teachers in Natal have been advised not to treat as a separate topic. Pupils are expected to develop a basic skill in calculating and interpreting the various financial ratios in a wide variety of applications, from Standard 7 to 10 level.

The Accounting Equation is a topic which is stressed from the start of the Standard 6 and 7 syllabi, and reinforced at various stages in the Standard 8 to 10 syllabi. Teachers have, again, been advised not to teach this as a separate issue, but to incorporate it at each appropriate stage. Many teachers have been known to introduce the equation in the context of the personal financial affairs of pupils, with the aim of enhancing understanding.

Furthermore, the Natal schools also cover the relation of Accounting concepts to the year-end procedures as well as the columnar year-end worksheet, which also forms part of the Accounting I course. The only topics in this module which receive little or no attention at high school level are those of extraordinary items and prior-year adjustments, and computer based systems.

Data gathering, recording, reconciliation and control, is covered in great depth at high school level and this also constitutes Module 3 of the Accounting I syllabus. Source documents, special journals, the cash book, control accounts, reconciliations and petty cash are covered extensively at high school level and, in fact, receive a great deal of attention in the high school textbooks.

Source documents and the recording of transactions in journals and ledgers is a topic which is covered particularly at Standard 6 to 8 level, as the basis for further development of the subject in subsequent years. The recording of transactions is initially covered with regard to service businesses, with development to retail businesses at Standard 7 level.

The importance of teaching methodology is particularly relevant in the topic of internal controls. Here again, Natal teachers have been advised to treat this topic on a continual basis and not as a separate issue. Pupils are to develop an awareness of the purpose behind certain bookkeeping procedures, such as posting to control accounts and subsidiary ledgers, and preparation of bank

reconciliation statements, in facilitating better internal control. This is an on-going topic which has received much attention by the Natal Subject Committee and in the Natal Senior Certificate Accounting examinations.

Module 4 of the Accounting I course covers the allocation of costs to Balance Sheet and Income Statement, and long-term financing. Topics in this module common to both syllabi are the distinction between assets and expenses, various categories of assets, depreciation, bad and doubtful debts, sources of finance, the nature of capital structure and gearing. The latter two topics have, moreover, received extensive attention in the Natal matric examination papers, although this does not appear to be the case in the other provinces.

One difference between the high school approach and the university approach is that the high school syllabus is based on the perpetual inventory system. The periodic system is covered briefly, as an alternative system, at Standard 9 level in the context of departmental businesses. It appears as if the university examinations stress the periodic inventory system and this could possibly be an area of adjustment for the high school Accounting pupil in his Accounting I year.

Topics in this module which receive little or no attention at high school level are intangible assets, inventory pricing and valuation methods, accounting for bills, and the concept of present value.

Manufacturing operations, budgeting and management planning and control are covered in Module 5 of the Accounting I course. The high school syllabus covers only the basics of this module, including the preparation of cost accounts and interpretation of unit costs. Areas that are not covered at high school level are standard costing and variances, computing the cost of finished goods and work-in-progress, and budgeting.

Manufacturing concerns have been omitted from the new syllabus, to be introduced over the period 1991 to 1994. The reason was to provide an opportunity for the inclusion of cash flow forecasting, elementary budgeting and close corporations. It was deemed by the developers of the syllabus that these areas would be of greater relevance to the wide spectrum of pupils than would manufacturing entities.

Module 6 comprises accounting for the effects of inflation. It is in this module that there is no formal common ground between the university and high school syllabi, although certain teachers do mention this topic in their lessons, where appropriate. Specific topics such as the Hicksian Concept, inventory profits, holding gains or losses, restating cost of sales and depreciation, net income on the current cost basis, and disclosure of the effects of inflation are not mentioned in the high school syllabus.

Cash flow statements and the analysis and interpretation of financial statements are listed under Module 7 and this is an area which receives much attention in the Standard 7 to

10 syllabi also. The Natal Senior Certificate Accounting examinations have consistently stressed this aspect, but there has been little evidence to date that the other provinces are willing to follow suit beyond the preparation of the cash flow statement and the simple calculation of the basic ratios.

It has been mentioned earlier that Natal teachers have been advised not to consider ratio analysis as a topic entirely separate from the preparation of financial statements. Teachers have been advised to introduce the topic gradually from Standard 6 or 7 level, with the aim of producing the pupil who will, consciously or subconsciously, critically assess any set of financial statements that he prepares.

Apart from the calculation of ratios and their interpretation, Natal teachers also cover the objectives of financial statements and their limitations. Many teachers have also adopted the practice of setting case study projects for their classes in each standard, and have incorporated the marks for Standard 10 projects in the matric assessment of their pupils. The feedback from these teachers on the success of the implementation of these projects has been most favourable in respect of enhancing pupils' analytical abilities and their awareness of current Accounting and economic developments.

### 3.6 COMMENT

It has been noted above that there appears to be a certain degree of divergence between the objectives in the teaching

of the high school and university Accounting courses, in that the high school course has to cater for those pupils who might not subsequently follow a career in Accounting.

There is, however, a degree of uncertainty as to whether or not the stated objectives of the high school Accounting course are actually being met, as this is largely dependent on the personal attributes of the individual teacher with regard to level of proficiency, dedication, ingenuity and adaptability, as well as on the academic ability of the pupils being taught. A teacher who perceives the development of mechanical, bookkeeping skills as an overriding aim, will be acting counter to the stated aims of the high school course.

Yet, in this researcher's opinion, there are two major factors which have a bearing on whether or not the subject is effectively taught at high school level.

The first is the academic training of the high school Accounting teacher who might be in the difficult position of having to impart concepts which are incorporated in the university course, yet who might not have received the relevant academic training to do so.

The second major factor is the time pressure under which the typical high school teacher operates. This can lead to an over-reliance on the textbooks available, and the point has been made that these textbooks seldom take cognisance of the objectives of the high school syllabus. As a result, many pupils might not develop the analytical skills

necessary for a successful transition from high school to university Accounting.

Nevertheless, the improved flexibility in the setting of high school syllabi and the ever-increasing proportion of common ground between the high school and university Accounting I syllabi, both serve to place the matric Accounting pupil at a relative advantage in his Accounting I year. Schroeder, in the USA, stated that high school Accounting "has more points in common with college introductory courses than many college accounting instructors would suspect or readily admit" (1985, 208).

It has been recognised above that teaching methodology is vitally important in communicating the content of any syllabus and the NED Accounting Subject Committee has been at pains to lay what it perceives to be a well-founded, reasoning approach to the subject which will be of benefit to the prospective Accounting I student as well as to the student who pursues other career options.

The University of Natal (Durban) syllabus and examinations do stress the conceptual side of the subject. Although the school Accounting syllabus mentions theory topics throughout the Standard 6 to 10 syllabi and makes specific allowance for the asking of theory questions in examinations, it is only the Natal Senior Certificate Accounting Higher Grade examination which has incorporated theory topics to any noticeable extent: approximately 5% to 10% of the paper over the years 1988 to 1990. Topics such as accounting concepts and rules, users of financial

statements and their information needs, limitations of financial statements particularly in times of inflation, and definitions of assets, liabilities, equity, expenses and revenue, have been consistently stressed by the Subject Committee.

In 'provincialising' the syllabus, the Natal Subject Committee has also stressed the analytical aspects of the subject and these have been reinforced by the type of questions set in the Natal Senior Certificate examination. A significant proportion of the annual matric papers covers not only the calculation of relevant ratios but also the interpretation of a variety of financial information.

At present, the major areas of the university Accounting I syllabus which do not constitute a formal part of the high school syllabus are close corporations, budgeting, an in-depth study of accounting standards, valuation methods, extraordinary items, intangible assets and inflation accounting.

The basics of the Accounting I course are, however, all covered extensively at high school level, while close corporations, cash budgeting and GAAP will be included in the new high school syllabus to be introduced over the period 1991 to 1994, at the expense of manufacturing concerns.

It should also be noted that certain teachers, particularly those in possession of a B.Com., do incorporate the

above-mentioned topics into their lessons and to a limited extent in their internal examinations and tests.

Apart from the great deal of common ground between the high school and university Accounting I syllabi, a most significant consideration is the amount of time devoted to the various topics at high school level. When one considers that, for example, year-end procedures of various forms of enterprise are stressed at high school level for approximately three months in each of the Standard 8, 9 and 10 years, whereas at university level they might be covered in a matter of several lectures and tutorials, it hardly seems surprising that the Accounting I students without previous exposure to Accounting at high school level feel that they are at a great disadvantage. The extensive grounding received in the bookkeeping cycle in Standards 6 to 8 is also covered in a fraction of the time at university level. These are areas which are likely to be crucial to the success which the student without high school Accounting is able to achieve in the Accounting I course.

The University of Natal treats its Accounting I group as a homogeneous unit. This has important implications for the performance of students with or without previous exposure to the subject.

On the one hand, the pace at which the course proceeds at university level might be too great for many students without previous exposure to the subject, and is likely to

be a major contributing factor to the relatively high drop-out rate of this group of students.

On the other hand, students with previous exposure to the subject are not likely to experience difficulties in the early stages of the Accounting I course and this could lead to complacency and the development of poor study habits which could have a long-lasting effect. Rowlands stated that "it would be a great pity should potentially good students suffer this fate because the university failed to take cognisance of their situation" (1988 (b), 21) and supported the contention that "the course should be structured in a manner which takes into account the different backgrounds of students" (1988 (a), 263). Chapter 8 contains responses on this issue from other universities in the country.

In Chapter 10, it will be seen that an ever-increasing proportion of the Accounting I student group comprises students with previous exposure to the subject. In 1990, when all students are considered, 75% of the group had undertaken the subject up to matric level. This statistic should be of great significance to the presenters of the Accounting I course. A course which, in most part, merely repeats topics which have been covered at high school level by the vast majority of students in the group, should hardly be regarded as ideal. This researcher shares Rowlands' concern that there is a "danger of good students losing interest in accounting through not being stimulated in an academic sense during the first few months at University" (Rowlands, 1988 (b), 21). Rowlands also

mentioned the potential loss of high quality students to other disciplines, a problem which the Accounting profession can ill-afford.

The common ground between the high school and university syllabi therefore presents a challenge to those persons responsible for the Accounting I course at university.

A corresponding challenge, however, faces the individuals responsible for the development and teaching of the high school Accounting course. The Curriculum Development Committee has to be alert to the changing character of the subject in order for the high school syllabi to retain their relevance. High school Accounting teachers have a responsibility to adapt to new developments in the subject and to develop the appropriate teaching and examining techniques which will be of benefit to pupils who later decide to follow careers in Accounting. The Senior Certificate Accounting examiners need to be sensitive to the fact that the content and structure of their papers have an important influence on the approach followed by teachers in the classroom situation.

In the opinion of this researcher, it is vitally necessary that channels of communication be opened between those responsible for the high school and university courses in order to ensure that course structures and teaching methodologies are appropriate to the needs of high school pupils and Accounting I students at university.

## CHAPTER 4

# SURVEY OF SCHOOL PUPILS

### 4.1 BACKGROUND

Certain educators have expressed reservations on the relevance of Accounting towards further study at university level, and this has cast doubt on the role of the subject in the secondary school curriculum.

It was recognised in the previous chapter, however, that the high school Accounting course caters for a wide spectrum of pupils and consequently needs to be of relevance not only to those pupils who later decide to pursue careers in Accounting, but also to those who might decide to follow other career options. An aim of the high school Accounting syllabus, to provide an incentive to further study in the subject, therefore forms only part of the overall course objectives.

A survey of high school pupils was undertaken in order to establish the proportion of high school Accounting pupils who plan to further their studies in Accounting at university level. It is anticipated that the results of the survey would provide an indication as to whether or not the high school Accounting course should be aimed largely towards the preparation of prospective Accounting I university students.

Certain members of the Accounting profession have been of the opinion that high school Accounting serves as a valuable recruiting tool for the profession. This contention is discussed in Chapter 9, but it is expected that the survey of high school pupils will indicate whether or not pupils who plan to follow a career in Accounting are influenced in their choice by their exposure to the subject up to matric level.

#### 4.2 RESEARCH METHODOLOGY

In order to fulfil the above-stated aims, a questionnaire was circulated to school pupils in Natal, English and Afrikaans, who would be writing the Natal Senior Certificate examination at the end of their matric year. The questionnaire was circulated in 1987 and 1988 and there was approximately a 50% response in each year. The questionnaire is provided in Appendix A (page 169).

The questionnaire was directed at all students, irrespective of whether or not their aspirations were to achieve matric exemption status, to attend university, or to follow a career in Accounting. The responses of all such pupils need to be considered in assessing the objectives of the high school Accounting course.

#### 4.3 GENERAL CONCLUSIONS

It was evident that the majority of respondents were not planning to further their studies at university level. However, there appears to be some indication that those

pupils who chose a B.Com. or B.Acc. tend to be those who had studied Accounting up to matric level.

#### 4.4 DETAILED RESULTS

The detailed results of the questionnaire are set out in Table 4.1 in Appendix B to this dissertation (page 188).

The data accumulated over the two years was remarkably consistent. The majority of school pupils do not have aspirations to attend university in order to further their studies. Over the two years analysed, only 37% of the respondents had definitely decided to attend university. Of these, 29% (i.e. 11% of total respondents) were planning to undertake a B.Com. or B.Acc.

Pupils with matric Accounting at Higher, Standard or Lower Grade, comprised between 33% and 35% of total respondents, a proportion which corresponds to the Natal Senior Certificate candidate numbers. In comparison, only 11% of total respondents were planning to undertake a B.Com. or B.Acc., indicating that a significant number of matric Accounting pupils were pursuing alternative career options. It is therefore important that the high school Accounting course provide the knowledge and skills that will be of relevance to these pupils in their chosen careers.

At the time of their choice of subject package at the end of their Standard 7 year, 25% of total respondents had considered a career in Accounting. By the end of their matric year, only 10% were still considering a career in

Accounting. Whilst there may be various explanations for this phenomenon, it is contended that there are three major reasons.

The first is that, as pupils progress through their schooling, they become more aware of their personal strengths and weaknesses and they become exposed to a variety of alternative career options. As a result, the careers considered while in Standard 7 are amended by the time they matriculate. The second explanation is that high school Accounting can serve as a valuable screening device for prospective accountants. A pupil with an interest in Accounting at Standard 7 level might find, by his matric year, that he has neither the aptitude nor the interest to further his studies in Accounting at university. The third explanation is that high school pupils without matric Accounting gain the perception that they will experience difficulty in achieving success in Accounting I at university at the first attempt and therefore choose alternative careers.

The survey does not disprove the contention that high school Accounting is a valuable recruiting tool for the Accounting profession. On the question of whether high school Accounting influences a pupil in the decision to pursue a career in Accounting, 23% to 24% of pupils with matric Accounting stated that they planned to follow a career in Accounting, while only 2% to 3% of non-Accounting matriculants planned to do likewise. 19% of pupils with matric Accounting were planning to undertake a B.Com. or

B.Acc. whereas only 6% of non-accounting matriculants were planning to do likewise.

A valid reason may be that non-Accounting matriculants have not chosen the subject at high school level because they lack the interest or the numerical aptitude and therefore would not be inclined to follow Accounting careers.

Nevertheless, an equally valid reason may be that exposure to the subject up to matric level can serve to motivate pupils into an Accounting career, particularly if the high school Accounting teacher has succeeded in developing the enthusiasm of pupils for the subject.

#### 4.5 COMMENT

It appears as if there is a greater proportion of Accounting matriculants in comparison to non-Accounting matriculants who plan to further their studies in Accounting, despite the fact that several leading private schools in Natal do not offer the subject. It should, however, be noted that an Accounting career option might have influenced many pupils in the choice of Accounting as part of their package, and the percentages quoted above will therefore contain a certain degree of bias.

It is felt that a more accurate gauge of the influence of school Accounting on further study and career choices would be obtained from analysis of the responses of Accounting I students. This is investigated in Chapter 10.

One definite conclusion that can be reached is that the vast majority of high school Accounting pupils will not pursue studies in Accounting at university level. It is therefore necessary for the high school Accounting syllabus to cater for these students who follow other career options.

# CHAPTER 5

## SURVEY OF UNIVERSITY ACCOUNTING I STUDENTS

### 5.1 BACKGROUND

An assessment of the relevance of high school Accounting towards further study at university level will not be complete without an appreciation of the views of that group of individuals most closely connected with the issue - the university students themselves.

Student surveys have been conducted in the past. Hutchinson and Hart (1972) found that significantly more matriculants without school Accounting concluded that they were disadvantaged in their first year university Accounting course. Friedlob and Cosenza found that students without previous exposure to high school Accounting believed that it "would have been of help if they had taken it". They found that 75% of the students surveyed were of the opinion that high school Accounting "was or would have been a definite help to them" (1981,15). Rowlands found, in a survey of students, that 81,1% of students indicated that "given the opportunity to choose their school subjects again they would include accounting in their subject package, and that 80,7% of these students perceived their reason to be the advantage they would gain in Accounting I" (1990, 5).

These questions were also put to the students at the University of Natal (Durban).

## 5.2 METHODOLOGY OF SURVEY

A questionnaire was circulated to Accounting I students of 1988 and 1989 at the University of Natal (Durban) in order to ascertain the perceptions held by the students of the Accounting I course and school Accounting. The questionnaire is provided in Appendix A to this dissertation (pages 170-171). The questionnaire was circulated towards the end of the academic year in order to obtain more well-informed responses from the students, but by this stage of the year students who had dropped out would naturally not form part of the student group. It will be seen in Chapter 10 that the vast majority of drop-outs comprises students without Accounting up to matric level. In the opinion of the researcher, responses from drop-out students, had they been included, would have served to accentuate the disadvantaged position of the student without previous exposure to the subject.

## 5.3 GENERAL CONCLUSIONS

The findings supported those of the earlier surveys mentioned in 5.1 above. The general conclusions are that the vast majority of students feel that school Accounting is of benefit to performance in Accounting I, while the vast majority of those students who did not undertake Accounting up to matric level regretted that they had not done so. There were similar findings for those students who were discouraged by school authorities from undertaking Accounting at school, as well as for those students who

attended high schools which did not offer Accounting as a course. In Natal, the majority of these students are products of private schools.

There was also evidence that school Accounting is both a valuable recruiting and screening tool for the Accounting profession, in that a large majority of matric Accounting pupils were motivated by their study of school Accounting into pursuing their studies in this field at university level.

#### 5.4 DETAILED RESULTS

Tables 5.1, 5.2 and 5.3 in Appendix B (pages 189-194) detail the responses obtained from students. Table 5.1 details responses from all students, Table 5.2 details responses from those students with previous exposure to matric Accounting, while Table 5.3 is a comparison of responses between students who had taken Accounting up to matric level and those who had not.

The more significant findings are explained below. Percentages for 1988 and 1989 respectively are reflected in brackets.

It was evident that the vast majority of students (78% and 81%) felt that, on reflection, Accounting should have formed part of their matric subject package. A significant percentage of students who had not done Accounting up to matric level (70% and 72%) felt that they should have done so.

These responses correlate with the view of a large majority of students (74% and 66%) who felt that high school Accounting assists in understanding concepts in Accounting I. A small minority (7% and 8%) disagreed with this viewpoint.

The majority of students (63% and 70%) felt that the Accounting I course proceeds too quickly. There was a smaller percentage of matric Accounting students (59% and 62%) who felt that the Accounting I course proceeds too quickly, than the percentage of non-accounting matric students (67% and 78%) of the same opinion.

The majority of students (62% and 56%) also felt that school Accounting assists in saving time in Accounting I as a result of the prior knowledge gained by students in the subject at high school. A minority (18% and 20%) disagreed with this opinion.

There was general consensus that the Accounting I course is demanding. However, it was significant that a smaller percentage of matric Accounting pupils (58% and 54%) felt that they experienced difficulties in Accounting I, in comparison to the percentage of non-Accounting matriculants (79% and 84%).

On the issue of whether or not high school Accounting serves as a recruiting tool for the Accounting I course or the Accounting profession, a large majority of matric Accounting students (72% and 67%) felt that their study of

Accounting at school level had motivated them to pursue their studies in Accounting at University level.

Certain university lecturers have been of the opinion that matric Accounting pupils develop complacency in their Accounting I year, and that this leads to their developing bad study habits which eventually contribute to their under-achievement in the Accounting I course. The survey revealed that only a minority of matric Accounting students admitted to complacency in Accounting I (39% and 28%). Apart from casting doubt on the honesty of the student responses, this might also be due to the university lecturers being alert to the fact that the majority of students have been exposed to the subject at high school level and therefore do not introduce new topics, particularly of a theoretical nature, at various stages of the Accounting I course. In the survey of lecturers at other universities in South Africa (see Chapter 8), the opinion was evident that complacency is the result of a combination of deficiencies in the content of the Accounting I course and individual student characteristics.

A certain number of students with matric Accounting (53% and 55%) felt that the high school Accounting syllabus was largely relevant to their studies in Accounting I at university level. A minority of matric Accounting pupils (29% and 24%) disagreed with this viewpoint. It has been pointed out in Chapter 3 that certain high school teachers are known to teach beyond the high school syllabus. This factor could have influenced the differing responses by students to the question of the relevance of high school

Accounting. On the question of whether the Accounting I course merely repeated work covered at high school, there were divergent responses for the two years (50% and 30%).

In order to ascertain the effects of the NED Subject Committee's strategy of advising a conceptual and analytical approach to its teachers, as opposed to a purely mechanical approach, students were posed a question on this issue. A minority of matric Accounting students in 1988 (39%) felt that they had been encouraged to adopt a "thinking" approach to the subject at school, but this increased to 56% in 1989. This response seems to correspond with the increased efforts of the NED Accounting Subject Committee during the early part of 1989.

It has been widely known amongst the high school Accounting teaching fraternity that certain leading schools in Natal either do not offer Accounting as a subject or actively discourage their top academic pupils from undertaking the subject to matric level.

The survey revealed that a significant number of students who had not undertaken Accounting up to matric level (18% and 18%) were discouraged by school authorities from doing so. The vast majority of these students (77% and 85%) regretted, on reflection, that they had not opted for the subject up to matric level.

Certain students (13% and 16% of total respondents) attended schools which did not offer Accounting as a subject. The vast majority of these students (86% and 81%)

felt that Accounting was a course they should have undertaken at high school level. This finding must be of relevance particularly to the private schools in Natal.

### 5.5 COMMENT

It was clear that Accounting I students perceive the high school Accounting course as one which will assist them in their Accounting I year in understanding concepts and saving time. The general opinion among students without previous exposure to high school Accounting was that this is a course they should have opted for at high school level.

The value of high school Accounting as a recruiting tool was also evident, a factor which appears to be appreciated by the Accounting profession (refer to Chapter 9).

It is hoped that the opinions of the student group will encourage the re-structuring of the Accounting I course in order to meet the needs of students with or without previous exposure to the subject. There is also a clear message to those schools, particularly the private schools, who do not offer Accounting as a subject. In the opinion of students from these schools, their perceived needs in respect of their future careers in Accounting have not been met.

# CHAPTER 6

## SURVEY OF NED ACCOUNTING SUBJECT COMMITTEE

### 6.1 BACKGROUND

The Accounting Subject Committee of the NED is chaired by the Accounting subject adviser and comprises representatives of Accounting teachers in government schools and private schools in Natal as well as representatives of the University of Natal, the Technikon and the teacher training colleges.

This body is responsible for the guidance of Accounting teachers in Natal schools. To this end, guidelines are issued and in-service courses are organised by this committee on an annual basis. The committee has made it a priority since 1987 to examine the aims in the teaching of high school Accounting in an effort to enhance the relevance of the subject to all pupils, including those who intend to further their studies in Accounting at university level. The opinions of this committee are therefore of significance to this study.

### 6.2 RESEARCH METHODOLOGY

A questionnaire was presented to each of the NED representatives on the Accounting Subject Committee. The

questionnaire is provided in Appendix A (pages 172-173). The purpose of the questionnaire was to ascertain the methodology suggested to high school teachers of Accounting in Natal and the extent to which the Subject Committee feels that implementation of the guidelines issued by them has taken place.

In order to appreciate the philosophy underlying the teaching of high school Accounting in Natal, the guidelines issued to Accounting teachers have been summarised below. Evidence of their application in the Natal Senior Certificate Accounting examination papers has also been noted.

### 6.3 THE TEACHING OF ACCOUNTING IN NATAL SCHOOLS

Since the introduction of the revised Standard 7 Accounting syllabus in 1984, the NED Accounting Subject Committee has considered the criticisms levelled against school Accounting, as outlined in Chapter 1. In guidelines issued at the annual seminars of Natal Accounting teachers from 1984 onwards it was stressed that the introduction of the revised syllabus provided an opportunity for all teachers to assess their teaching and testing methods, and to adjust these accordingly where necessary.

The guidelines outlined by Hall in his presentation of "The 'Thinking' Approach in the Teaching of Accounting to School Pupils at the Higher Grade" at the 1988 seminars contained the following advice:

1. Consider the meaning of the word "Accounting" and relate this to the objectives of teaching the subject at high school level.
2. Lead pupils in transferring common knowledge and personal experience into the business accounting situation in order to facilitate more meaningful understanding.
3. Always stress the necessity and reasoning for maintaining books of account and relate this to the maintenance of internal control.
4. Instil a questioning approach in pupils and encourage expression of a wide diversity of opinion amongst pupils.
5. Set tests and examinations in such a way as to evaluate insight, to encourage expression of opinions by pupils, to require analysis and interpretation of information, and to provide a challenge to brighter pupils. Questions can be structured in such a way as to lead the pupil towards expressing opinions that he never knew he had!

Hall then issued a further document representative of the Subject Committee's opinions in response to the request by teachers for more specific guidelines. These were outlined in Hall's second paper "The 'Thinking' Approach in the Teaching of Accounting - Part II" and are summarised as follows:

**Guidelines in the setting of examination papers**

1. Never use questions photocopied from a textbook.
2. Set questions which test insight.
3. Incorporate theory into the papers.
4. Vary the questions as much as possible.
5. Set a demanding paper but award method marks.
6. Refer to papers of other schools (with good Accounting reputations).
7. Questions to be geared towards "Accounting" topics rather than mechanical "Bookkeeping" procedures.
8. Apply subjective marking techniques for questions requiring expression of opinions.
9. Provide skeleton answer sheets from time to time in order to prevent emphasis on areas which can be learnt in rote fashion by pupils.
10. Ensure that the paper is structured in such a way that the weak candidate who deserves to pass has an opportunity to do so.

**Guidelines for the Classroom Teaching Situation**

1. The questioning approach and incorporation of theory (theory not to be considered as a separate topic).
2. Careful variation of exercises - do not be restricted by the order of chapters and exercises in the textbook.

3. Use of well-devised questions used previously in examinations and tests, as textbook exercises tend to be repetitive and unchallenging.
4. Accounting concepts to be related to lessons whenever possible.
5. Teaching of accounting to beginners through incorporation of the Accounting Equation.

It was hoped that, through these guidelines, teachers would become more flexible in their teaching and examining, and would instil flexibility in their pupils, the lack of which is a major criticism from the universities. It was also hoped that the guidelines would assist in making the subject more relevant to pupils who pursue careers in fields other than Accounting, as well as to those pupils who do. A further purpose of the guidelines was to encourage teachers to become less textbook-bound and to seek avenues in the syllabus for the application of a conceptual and analytical approach, as opposed to a "mechanical" or "pure bookkeeping" approach. The underlying purpose was to assist teachers in achieving their maximum potential as teachers of school Accounting.

In the words of Freeman: "Anything is possible in this day and age. Some phases of accounting can be learned without a teacher. But only a good teacher can develop the right attitudes, understanding and appreciation of business practices and procedures. A good teacher comes in where the text material ends. There is not, and probably never will be, an adequate substitute for a good teacher of high school bookkeeping and accounting" (Freeman, 1970, 29).

Pfaff identified the basic purpose of the high school course as "to enhance the ability of a student to understand his economic environment" and to "conceptualise the terminology found on financial statements". He suggests that "there is no need for students to develop expertise in the practice of bookkeeping to realize this aim" (Pfaff, 1970, 28) and that this, in fact, could be counter-productive to the aims of high school accounting.

Johns states that "it is now up to the teachers, and especially the planners and examiners, to lay the sort of open-minded, reasoning foundation which will be of most benefit to their pupils on arrival at WITS (University). Unfortunately, the matric HG examination papers, on the whole, are not yet measuring these values" (Johns, 1984, 3).

It is the opinion of the Subject Committee that the matric Accounting papers from 1988 onwards in Natal have been a major factor in forcing teachers to adopt a more flexible, reasoning approach in their testing and teaching. There has been a noticeable change in the type of question set in the Natal Senior Certificate Accounting Higher Grade examination since 1987.

The most noticeable changes include incorporation of theory to a limited extent (accounting for 5% to 10% of the total marks of the papers); a major difference in the style of questions covering ratio analysis and interpretation (25% to 35% of the total marks); incorporation of the open-ended question; the testing of insight in a wide variety of ways

(e.g. in testing of year-end adjustments not specifically covered by textbooks and in "back-to-front" type questions where the final product is provided and pupils are required to provide comments or reasons); and a movement away from the typical textbook-type questions.

The spectrum of reaction of school Accounting teachers to this approach has ranged from whole-hearted support, through insecurity to total disagreement. An encouraging feature, however, is that the majority of Natal teachers seem to support the movement towards the "thinking" approach, and several teachers have stated that they had, in fact, been following a similar approach for many years. The reactions of teachers are outlined in Chapter 7. Teachers have also continually been made aware that the "thinking" approach cannot merely start in the Standard 10 year, but involves a constant progression from the first Accounting lesson in Standard 6 or 7. The fact that many teachers are taking pride in the type of original questions they set in examinations or tests from Standard 6 level is most encouraging.

The Subject Committee are, nevertheless, aware that there are certain teachers, albeit in the minority in Natal, who seem unwilling to meet the challenge or who lack the confidence to do so. It is for this reason that extensive guidelines have been issued and that the 1990 workshop presented throughout Natal focused specifically on educating teachers on the subjective marking of theory-type and interpretation-type questions. The Subject Committee has also been obliged to issue a document outlining

examples of theory topics to be covered in the teaching of the syllabus, as an aid to the teacher lacking in confidence. Although theory topics in the matric examinations have been based on this list, the examiner has been at pains to set questions in such a way as to discourage rote learning of answers to the listed topics.

However, members of the Subject Committee consider this list of theory topics as unnecessary and welcome the greater flexibility of theory topics that will emerge with the implementation of the revised syllabi from 1991 to 1994.

#### 6.4 GENERAL CONCLUSIONS

There has been a conscious attempt by the NED Accounting Subject Committee to guide teachers towards a more appropriate approach in the teaching of high school Accounting. The Subject Committee, however, is aware that the existing syllabus, although a great improvement on the previous syllabus, does place a certain constraint on working towards an approach that would be totally acceptable to all universities. They are of the opinion that the vast majority of teachers in Natal have responded well to the change in approach, but realise that there is a vociferous minority of teachers who have not come to terms with the changes.

## 6.5 DETAILED RESULTS

The results of the questionnaire issued to the NED Accounting Subject Committee are summarised in Table 6.1 provided in the Appendix B (page 195).

There has been a noticeable change in the methods of teaching Accounting in Natal schools, particularly since 1987, and the survey revealed that this approach has the unanimous support of the Subject Committee.

It is the opinion of the Subject Committee (92%) that the matric Accounting papers under the present syllabus have been a major influence on teaching methods, and this has been backed up with guidance to teachers at the annual seminars.

The Subject Committee has noticed a difference in style of the Natal matric Accounting papers when compared with those of other provinces. The differences noticed were identified by the respondents as:

- \* Pupils are required by the Natal papers to express opinions on a variety of issues
- \* Pupils are required to exercise independent thought on questions that do not always appear in a textbook
- \* There appears to be less emphasis on the mechanical bookkeeping-style question
- \* Most questions contain unusual variations which require the application of insight.

The Subject Committee acknowledges that there are some teachers who appear to be unable or unwilling to adopt a "thinking" approach. The main reason for this was identified as the natural resistance to change. The Subject Committee is well aware of the dynamic nature of Accounting which is in a constant state of change, and that teachers have a duty to update themselves in the subject and to adapt to the changing environment as it affects Accounting. However, the education environment has long been perceived by many as a stagnant one with little incentive, apart from personal satisfaction, for a teacher to better himself/herself. The Accounting teacher thus finds himself/herself operating within two different environments. The environment which dominates depends entirely on the personal characteristics of the teacher.

Other reasons supplied by the respondents for the inability of certain teachers to adapt are their past training which might have had a mechanical emphasis, their past experience of previous syllabi which covered only bookkeeping procedures, the fact that some teachers feel threatened when faced with differences of opinion from their pupils, and the fact that, unless a questioning approach is instilled from an early stage, pupils tend to demand clear-cut answers to questions.

The Subject Committee was divided on the issue of whether or not the syllabus restricts the teacher who wishes to instil a "thinking" approach, but all welcomed the introduction of the theory components in the new syllabi introduced at Standard 7 level in 1991. 85% of the

committee did, however, acknowledge that teachers are still too textbook-bound, and ascribe this to the time factor needed in developing original approaches, particularly where there might be three different groups of pupils (Higher, Standard and Lower Grade) in the same class, as well as to a lack of confidence on the part of certain teachers who feel that the quality of their training has been inadequate.

The Subject Committee was also divided on the issue of whether or not school Accounting pupils lack the flexibility and the ability to adapt to alternative approaches at university level. Where such cases do exist, the reasons provided were stereotyped teaching by certain teachers and that fact that some teachers and many pupils work mainly towards the examination paper and results.

The Subject Committee is of the opinion that the academic quality of the school Accounting pupil in Natal has improved over the past few years. This opinion is supported by the fact that of the list of the top 30 pupils who wrote the NED Senior Certificate examination in 1988, 9 pupils had Accounting in their subject package, while in 1990 this figure had risen to 17 pupils out of the top 30. This is despite the fact that most of the leading private schools do not offer the subject.

The reasons for the improved quality of Accounting pupils were identified by the Subject Committee as:

- \* The new subject packages introduced in Natal schools in 1985, including the Double Science-

Accounting and History-Accounting courses

- \* The fact that the subject in Natal now provides a challenge to the bright pupil as evidenced by the matric Accounting papers and is no longer seen as a "soft option"
- \* The fact that career-orientated education is increasing in importance in the new South Africa (this is evidenced by the Walters Report)
- \* The fact that the subject as taught in Natal has relevance to a pupil irrespective of whether or not he/she wishes to pursue a career in Accounting
- \* The fact that many teachers are enthusiastic over a "thinking" or questioning approach and that this has had a motivational effect on pupils.

6.6 COMMENT

The Subject Committee appears to be aware of the shortcomings of school Accounting as expressed by university authorities. It is for this reason that extensive guidance has been given to teachers on an on-going basis since the introduction of the present syllabus. It is the intention of the NED Subject Committee to step up this guidance with the introduction of the new syllabi over the period 1991 to 1994, and to enlist the aid of university authorities and the Accounting profession in this regard.

# CHAPTER 7

## SURVEY OF SCHOOL ACCOUNTING TEACHERS

### 7.1 BACKGROUND INFORMATION

The efforts of the NED Accounting Subject Committee have been noted in the previous chapter. The crucial factor in ensuring the success of their proposals naturally lies in the hands of the high school Accounting teacher.

In 1990, there was a total of 89 schools whose pupils write the Natal Senior Certificate examination. At these schools, there were 126 teachers involved in the teaching of Accounting up to matric level. 9 of the 89 schools do not offer Accounting as a subject. They are Durban Girls' College (private), George Campbell Tech. High School (government), Hilton College (private), Kearsney College (private), Michaelhouse (private), The Thomas More School (private), Treverton College (private), Hoer Landbouskool Vryheid (government), Weston Agricultural College (government).

If one excludes the technical and agricultural schools, it is significant to note that the only schools which do not offer Accounting as a subject are the private schools. The reasons for this are not known with certainty, but could include the lack of available high quality staff, a

restrictive staff allocation which precludes the introduction of any new subject and, possibly, a long-held belief that high school Accounting has no place in what is perceived to be a broad, general education programme.

## 7.2 RESEARCH METHODOLOGY

Questionnaires were sent to all Standard 10 Accounting teachers in schools in Natal whose pupils would be writing the Natal Senior Certificate Accounting paper.

There was a total of 126 matric Accounting teachers in Natal in 1989 and 111 of them responded to the questionnaire.

The purpose of the questionnaire was mainly to ascertain their opinions on the syllabus introduced in 1984 and their attitude to the methodology advocated by the NED Accounting Subject Committee (see Chapter 6). The questionnaire is provided in Appendix A (pages 174-177).

## 7.3 GENERAL CONCLUSIONS

The results of the questionnaire indicate that the vast majority of matric Accounting teachers in Natal are supportive of the "thinking" or "Accounting" approach recommended by the Accounting Subject Committee. A significant majority of teachers feel that the emphasis on "Accounting" as opposed to "bookkeeping" aspects of the syllabus in Natal is either appropriate or still

insufficient, that the emphasis on theory is appropriate or should be increased, and that the testing of insight is appropriate. They also believe that the syllabus introduced in 1984 is more relevant and interesting to both teachers and pupils.

The inclusion of such topics as Accounting Concepts and Generally Accepted Accounting Practice in the 1991-1994 syllabus should contribute towards satisfying those teachers who feel that the integration of underlying theory should be increased.

The response of the Natal teachers is a feature which should serve as encouragement to authorities in the other provinces who feel that their teachers will not respond to an overhaul of their teaching methods.

#### 7.4 DETAILED RESULTS

The responses to the questionnaire are detailed in Table 7.1 provided in Appendix B (pages 196-197).

The majority of teachers (66%) had taught under both the previous and the present syllabus, but all teachers were aware of the contents of the previous syllabus. 93 teachers (85%) were certain that the present syllabus is more relevant to all pupils than was the old syllabus, while 73 (66%) also felt that the present syllabus is more relevant to those pupils who do not intend to further their studies at university level.

The vast majority (75%) felt that the present syllabus was both more interesting to pupils (no dissensions) and more interesting to teach (2 dissensions) in comparison to the previous syllabus.

51% of teachers felt that their teaching methods had changed since the introduction of the present syllabus whereas 20% felt that their methods had not undergone change. Most of this 20%, however, were of the opinion that they had always adopted a "thinking" approach in their teaching, even under the old syllabus.

74 teachers felt that the trend towards more emphasis on "Accounting" as opposed to "Bookkeeping" aspects of the syllabus was appropriate, while 17 felt that the trend should move further in this respect. This tends to indicate 82% support for the "thinking" or "Accounting" approach recommended by the NED Accounting Subject Committee.

As far as the trend towards testing of insight is concerned, there were 77 teachers who felt it was now appropriate, while a further 5 felt the trend should be continued. This indicates 75% support for movement in this direction.

On the issue of theoretical aspects of the subject, there were 50 teachers who felt the emphasis was now appropriate, while a further 43 felt the trend should be enhanced. This indicates 82% support for movement in this direction.

58 teachers (53%) felt that Accounting as taught in Natal no longer comprises mere regurgitation of set procedures by pupils, while 23 teachers (21%) felt that this was still the case.

### 7.5 COMMENT

There appears to be an awareness by matric Accounting teachers in Natal that teaching methods should evolve in order to meet the improved objectives of the subject.

Whilst a number of teachers have expressed concern over short-comings in their past training, it is encouraging that deficiencies are often recognised and that the teachers concerned generally appear to be willing to accept further guidance from the Subject Committee.

In the opinion of this researcher, however, certain teachers still appear to be unaware of the increased flexibility in the development of syllabi and their responsibility to update themselves on new developments in accounting standards and generally accepted accounting practice.

# CHAPTER 8

## SURVEY OF UNIVERSITY ACCOUNTING LECTURERS

### 8.1 BACKGROUND

Chapters 6 and 7 covered the topic of high school Accounting from the perspective of the high school Accounting teacher. The opinion of the university lecturer is therefore necessary to obtain a balanced view.

In the past, certain university lecturers have been either quoted or misquoted by school authorities on the topic of the relevance or otherwise of high school Accounting towards further study at university level. It is hoped that this survey of Accounting I lecturers at all the major universities in South Africa will provide a definitive picture of opinions on this topic.

In Chapter 2 it was noted that Rowlands was of the opinion that the first year university Accounting course should be structured in a manner which takes into account the differing backgrounds of students. The University of Natal, however, treats its Accounting I group as a homogeneous unit. A further objective of the survey was therefore to establish whether or not the approach, as adopted by the University of Natal, receives country-wide support.

## 8.2 RESEARCH METHODOLOGY

A telephonic questionnaire was conducted with each of the lecturers in charge of the Accounting I course at the major South African universities.

The universities covered were Natal (Durban), Natal (Pietermaritzburg), UNISA, Durban-Westville, RAU, Orange Free State, Potchefstroom, Pretoria, Witwatersrand, Cape Town, Rhodes, Stellenbosch and Port Elizabeth.

The questionnaire is provided in Appendix A (pages 178-179). The purpose of the questionnaire was to ascertain the attitudes of university lecturers to school Accounting, their opinions on the relevance of school Accounting to further study at university level, and alternative methods of structuring the university Accounting I course.

## 8.3 GENERAL CONCLUSIONS

There appears to be general consensus among Accounting I lecturers that the present school Accounting syllabus is of relevance to the Accounting I student, particularly at the half-way stage of the Accounting I course. It is significant that there are some lecturers (31%) who are not convinced that there is a marked difference in the year-end results between those students who had studied Accounting at school level and those who had not. This appears to be at odds with the analysis of year-end results at the University of Natal (Durban) and is possibly owing to the

fact that year-end results do not reflect drop-outs. The majority of respondents feel that the student with previous exposure to Accounting at school level has a better chance of passing Accounting I at the first attempt.

They are of this opinion despite the fact that they felt that the level and quality of training of the school Accounting teachers has created problems for lecturers at university.

Although the majority of respondents feel that there is a need for a supplementary course for students without previous exposure to Accounting at school level, there is a diversity of opinion as to how this is to be achieved. Rowlands has earlier warned of the shortcomings of treating all Accounting I students as a homogeneous group and has suggested that the early advantage enjoyed by the student with previous exposure to Accounting in the Accounting I year can be significant if catered for effectively. The variety of strategies employed by the various Universities include:

- \* A one-year bridging course which is undertaken by students without previous exposure to Accounting, before undertaking Accounting I
- \* Workshops in addition to tutorials
- \* Separate classes which are lectured along differentiated lines
- \* Treatment of the Accounting I group as a homogeneous unit

- \* An alternative Accounting course for those students who do not wish to proceed through to the C.A. qualification.

#### 8.4 DETAILED RESULTS

The results of the questionnaire addressed to the university lecturers of Accounting I are summarised in Table 8.1 in Appendix B (pages 198-199).

Whilst most of the 13 respondents (77%) were conversant with the contents of the school Accounting syllabus, only 2 respondents (18%) were aware of the newly developed approach to the subject as taught in Natal schools.

All the lecturers covered by the questionnaire (100%) are of the opinion that the student with matric Accounting will obtain better marks at the half-way stage of the Accounting I year, while 54% are of the opinion that these students will also achieve better marks at the year-end than their contemporaries without matric Accounting. A minority, 31%, felt that the matric Accounting student will not necessarily achieve better year-end marks than the student without previous exposure.

The majority (69%) also feel students with matric Accounting have a better chance of passing Accounting I at the first attempt. A minority of 23% felt that this is not necessarily the case.

There is an almost equal diversity of opinion as to whether or not the student with matric Accounting is more likely to proceed through to a Dip.Acc. or C.T.A. than the student without previous exposure to Accounting. Chapter 11 contains an analysis of the 1991 Dip.Acc. student group at the University of Natal (Durban). This group will contain the first students with exposure to the present school Accounting syllabus (i.e. matriculants of 1987). There appears to be a certain degree of evidence that the student with matric Accounting is more likely to proceed through to a Dip.Acc. than a student without previous exposure, but the results are not entirely conclusive and a study of the Dip.Acc. groups in 1992 and 1993 should throw further light on this aspect.

The majority of lecturers (85%) feel that school Accounting is of relevance to the Accounting I student, but the majority (62%) also feel that the present syllabus is too bookkeeping-orientated and that the level and quality of training of school Accounting teachers has created problems for university lecturers. These problems are identified as the students' lack of theoretical knowledge, an unwillingness to think independently, an inflexible approach by many students with matric Accounting, and an inability to explain the reasoning underlying Accounting procedures.

The majority (85%) feel that students with previous exposure to Accounting tend to be less adaptable to new approaches at university, but they do acknowledge that this depends on a combination of the characteristics of the

individual student and the approach adopted by his/her school Accounting teacher. Certain lecturers are convinced, however, that the blame lies entirely at the door of many Accounting teachers in not instilling a flexible approach in their pupils.

9 respondents (69%) felt that students with matric Accounting tend to become complacent during the Accounting I year. 4 respondents (31%) disagreed with this opinion and made the point that the structure of the Accounting I course was important in eliminating complacency.

12 of the 13 respondents were of the opinion that Accounting I lecturers are faced with a major problem due to the fact that some students had studied Accounting at high school level, whereas others had not. Most were, however, of the opinion that this problem can be solved through a differentiated lecturing approach, taking into account the differing needs of the two subgroups of students. The majority of lecturers (77%) are of the opinion that the two sub-groups of students of Accounting I need to be treated in a differentiated fashion, but there is no general consensus among the universities as to how this can be achieved.

## 8.5 COMMENT

The majority opinion among lecturers in charge of the Accounting I courses at the 13 major South African universities is that high school Accounting is of benefit to the prospective Accounting I student at university in

providing him/her with a better chance of passing at the first attempt. There is almost total consensus that a differentiated approach in the teaching of the two subgroups of students is necessary in order to meet the needs of all students. However, to date, the University of Natal has not implemented a structure along these lines in its Accounting I course.

# CHAPTER 9

## SURVEY OF ACCOUNTANTS IN PUBLIC PRACTICE

### 9.1 BACKGROUND

Towards the end of the Standard 7 year, school pupils are required to make a decision on the subjects which will comprise their subject package for matriculation purposes. In many cases, the decision on whether or not to undertake Accounting up to matric level is determined by its perceived relevance to a future career. Guidance counsellors have been known to quote opinions frequently from members of the Accounting profession in their advice to Standard 7 pupils. The opinions which are often quoted may vary considerably from school to school, depending on the subjective viewpoint of the accountant who is approached.

The survey of accountants in public practice which forms part of this study, is intended to provide balanced information based on the collective opinions of the leading accounting firms in the Durban area.

### 9.2 RESEARCH METHODOLOGY

It was assumed that the partner designated as the Training Officer in each accounting firm was in the best position to

represent the opinion of the firm on the relevance or otherwise of school Accounting towards further study in the pursuit of a C.A. qualification.

A questionnaire was presented to Training Officers at each of the major Accounting firms in the Durban area. A total of 28 firms responded to the questionnaire, including the largest 10 accounting firms (as identified by the Financial Mail in their edition Vol.119 No.13 of 29 March 1991). The responses of these 10 firms were also tabulated separately as these were felt to be the most significant of the responses obtained.

The questionnaire is provided in Appendix A (pages 180-181).

### 9.3 GENERAL CONCLUSIONS

The results of the questionnaire appear to dispel the myth that the Accounting profession is not convinced of the value of Accounting at high school level. There appears to be widespread consensus among the Training Officers of accounting firms (particularly the largest 10) that:

- \* school Accounting is of benefit to the student who wishes to follow a career in Accounting
- \* school Accounting is a valuable recruiting tool for the profession
- \* the first-year trainee accountant with matric Accounting is more proficient at the tasks allocated to him/her in the office situation

- \* trainees with matric Accounting are not necessarily less adaptable to new or different approaches
- \* school Accounting is of benefit to the prospective entrepreneur who does not follow a career in Accounting
- \* school Accounting is not necessarily "bookkeeping" orientated.

#### 9.4 DETAILED RESULTS

The results of the questionnaire issued to Training Officers of Accounting firms in the Durban area are summarised in Table 9.1 in Appendix B (page 200). Responses of the largest 10 accounting firms in South Africa were extracted and are reflected separately.

The responses of these ten firms are discussed below, but it should be noted that these views generally corresponded with those of all the respondents.

Although few of the respondents appear to be aware of the contents of the school Accounting syllabus, and none of the respondents had seen the NED Accounting papers since 1987, they appear to have definite views on the value of school Accounting to the trainees and the profession.

On the question as to whether high school Accounting is of benefit to the student who wishes to follow a career in Accounting, 9 of the 10 largest firms felt that this was so, with 1 unsure.

The value of high school Accounting as a recruiting tool for the profession was well appreciated, with 8 out of the largest 10 firms supporting this view, with 2 unsure.

There was general consensus (7 out of 10) that the first-year non-graduate trainee accountant with matric Accounting was more proficient at tasks allocated to him, in comparison to his counterpart without matric Accounting. There was only 1 dissension on this point.

The complaint raised by some university lecturers (see Chapter 8) on the lack of flexibility on the part of matric Accounting pupils to new or different approaches, was also posed to the Training Officers. 7 out of the 10 disagreed with this complaint, 1 agreed and 2 were uncertain. This difference of opinion between the university lecturers and the Accounting profession may well be due to the different perceptions which exist and to different foci of attention i.e. lecturers possess essentially an academic viewpoint of the subject, whereas the profession tends to be influenced by practical considerations.

One of the objectives of the NED Accounting Subject Committee has been to increase the relevance of the subject to those who might not wish to further their studies in Accounting at university level. The Training Officers were asked their opinion on the benefit of high school Accounting to the prospective entrepreneur. All 10 were convinced of its benefit in this regard.

5 of the 10 respondents were aware of the "thinking" approach as advised by the NED Accounting Subject Committee to high school teachers, while only 2 felt that the subject was still too orientated towards "bookkeeping" aspects.

On the topic of whether or not the matric Accounting pupil was more likely to proceed through to a Dip.Acc. in comparison to the non-Accounting matriculant, there was no clear opinion. 2 respondents felt that this point was true, 2 disagreed, while 6 were unsure.

#### 9.5 COMMENT

There appears to be definite consensus, particularly amongst the ten largest accounting firms, on the relevance of high school Accounting to further study and to the accounting profession. It is hoped that this survey will provide clarity to educational authorities, particularly high school guidance counsellors, on the opinions of members of the accounting profession.

# CHAPTER 10

## ANALYSIS OF ACCOUNTING I RESULTS 1988 TO 1990

### 10.1 DESCRIPTION OF THE STUDY

#### 10.1.1 Identification of the student group

The study covered all students who registered for the Accounting I course over the years 1988 to 1990. Those students who were repeating the course were eliminated from the study on the grounds that the background they would have picked up in their first attempt at the course would distort the conclusions reached on the relationship between high school and university Accounting.

The students were then identified from registration records as to whether or not they had undertaken Accounting as a matric subject.

For the purposes of this study, the following abbreviations will be used:

MA students = students with matric Accounting

NMA students = students with no matric Accounting

The student group at the University of Natal (Durban) comprises students who have matriculated under several different examining authorities in South Africa. In order to eliminate the effect of differing standards, the students who had written the Natal Senior Certificate examination were identified and their performance in Accounting I was analysed. The approach followed in the

teaching of Accounting at schools under the auspices of the Natal Education Department (NED) has been mentioned in Chapters 2, 6 and 7. The main attention of this study is on the relevance of school Accounting, as taught in schools under the NED, towards further study at the University of Natal (Durban).

The University of Natal offers one first year financial Accounting course which was a compulsory course for all first-year B.Com. students in 1988.

The B.Com. requirements at Natal University underwent a change during 1989 with the introduction of a special Accounting course, titled Business Accounting I. This course was designed to cater for the B.Com. student who did not wish to pursue an Accounting career and students undertaking this course would not earn the right to proceed to Accounting II. A number of students who had originally registered for the Accounting I course at the start of 1989 took up the option of converting to the Business Accounting I course during that year.

In order to facilitate comparisons over the three years of the study, the 1989 data has been adjusted in certain analyses to take into account the number of students who took up this option. It must be remembered, however, that a significant number of these students could have been motivated into converting to this course, and hence a change in career, as a result of their poor performance in Accounting I throughout the year. In assessing the 1989 results, it should be borne in mind that these students might well have proved to be drop-outs or failures had they not been afforded the opportunity of converting to the Business Accounting I course.

At the start of 1990, B.Com. students were faced with the option of registering either for the Accounting I course or the Business Accounting I course. The scope of this study covers only those students who register for the Accounting I course and excludes students registered for Business Accounting I. Students registering for the Business Accounting I course are not entitled to proceed to Accounting II and as such do not have aspirations to a professional Accountancy qualification. To these students, Accounting may be seen as merely an ancillary course to their main field of study, such as Law, and to incorporate them in the study would have introduced a further complication i.e. the differing content between the Accounting I course and the Business Accounting I course.

The University of Natal (Durban) offers only one Accounting I course. The University does not follow the practice of some other South African universities in catering separately for the two subgroups of students i.e. those with previous exposure to Accounting at high school level and those without.

Strategies employed at other universities include bridging courses or additional tutorials for those students without previous exposure, or two separately designed Accounting I courses. At the University of Natal, the Accounting I group is treated as one homogeneous unit. The Accounting I lecturers are, however, alert to the fact that a large proportion of the group has undertaken Accounting to matric level and in order to stimulate these students, the lecturers do

introduce topics, particularly of a theoretical nature, that have not been covered in depth at high school level.

Accounting I test results of 1988 to 1990 were used as a starting point in identifying students. These lists were cross-checked against records of student registrations for the Accounting I course.

There were instances where students registered for the Accounting I course but changed course within a matter of weeks. It was felt that such students should not form part of the analysis of Accounting I results. It should be noted, however, that very few of these students were products of the NED matriculation system and, as such, would not have affected the results of the main focus of the study i.e. the analysis of results of NED students.

Students who formed part of the analysis were those who registered for the Accounting I course and wrote the first test of the year.

Drop-outs were regarded as those students who wrote the first test of the year but did not complete the course i.e. did not write the final year-end examination.

Even though the University of Natal requires students to achieve a year-end mark of 55% before being allowed to proceed to Accounting II, failures were regarded as those students who did not meet the pass requirement of a 50% year mark. Drop-outs were regarded as failures.

### 10.1.2 Methods of analysis

Two methods of analysis were employed.

The first was the calculation of drop-out rates, pass rates and average marks of MA and NMA students using simple arithmetical techniques, with the number of drop-outs, passes and total marks being divided by the number of students in each sub-group.

The second, and more conclusive, method involved the statistical comparison of the performance of the two sub-groups of students, using regression analysis and unpaired T-tests.

To this end, data obtained from the study was entered onto an Oxstat computer program for statistical analysis. All results were expressed in terms of mean values  $\pm$  standard deviation (SD).

Frequency distribution of the relevant variables was then determined by examination of the degree of skewness of these variables. All data was found to be parametric in distribution and therefore the significance of differences was determined using Student's Unpaired T-test. For determination of correlations, use was made of linear regression, results expressed in terms of Pearson's correlation co-efficient. Testing was two-tailed throughout and the statistical significance was defined at the 5% level.

### **10.1.3 Treatment of drop-outs**

It is contended that the treatment of drop-outs is crucial to the interpretation of Accounting I results. To restrict the study to only those students who complete the course would merely represent part of the overall theme of this dissertation, namely the relevance or otherwise of high school Accounting to further study at university level. Drop-out statistics could possibly provide the most crucial evidence to this question.

In the comparison of Accounting I marks for each subgroup of students, a problem encountered was the magnitude of the mark to assign to drop-outs. It was therefore decided to treat drop-outs in two different ways i.e. through their exclusion and inclusion.

For the purposes of the statistical comparison of marks of the MA and NMA groups of students, using Unpaired T-tests and regression analysis, it was necessary to exclude drop-outs owing to the distortion that arbitrarily assigned marks would have on the results.

As the drop-out rate among the NMA group was seen to be greater than that of the MA group, it is evident that the relative disadvantage of NMA students would have been emphasised had drop-outs been included in the statistical analysis. This factor was also recognised by Rowlands who investigated drop-out rates, but also did not incorporate drop-outs in his statistical analysis of marks.

Students who converted to Business Accounting I in 1989 were also excluded from the statistical analysis. However, it should be remembered that whilst many of

these students might have had valid reasons for conversion, a sizeable proportion could have found a change of course necessary as a result of lack of achievement in Accounting I.

The standpoint taken in this study, however, is that to ignore the drop-outs would result in misleading data, as comparisons would be made merely between those groups of students who survived the course. Average marks of both groups, including drop-outs, were therefore also calculated with drop-outs being assigned a mark of 0%.

No attempt was made to identify the reason for drop-out, the assumption being that inability to cope with the subject would be the predominant cause. There were, in fact, a number of students who wrote the year-end examinations and achieved marks below 13%. It is therefore submitted that a mark of 0% can be held to represent a student who is not capable of being in a position to write the year-end examination.

It should be noted, however, that this assumption affects only the calculation of average marks in sections 10.10 and 10.11 below, and an alternative calculation excluding drop-outs has also been done.

The awarding of a mark of 0% to drop-outs is a point of departure which could lead to widely divergent results in comparison to previous studies which used solely statistical techniques, but it is intended as a means whereby the performance of all students, not only the survivors of the course, can be assessed.

#### **10.1.4 Explanation of the terms "average" and "mean"**

The method of incorporating drop-outs into the study has been explained above. The term "average" mark will be used to indicate the result obtained by dividing the total number of marks obtained in Accounting I by the number of students comprising the student group in each year, with drop-outs being awarded a mark of 0%.

The reasons for the exclusion of drop-outs in the application of unpaired T-tests have also been explained above. The term "mean" Accounting I mark will be used to indicate the result obtained when drop-outs are excluded from the statistical analysis. In other words, the "mean" will reflect the performance of those students who "survived" the Accounting I course to the extent that they were in a position to write the year-end examination.

Differences in the mean Accounting I marks of MA and NMA students should therefore be carefully considered in view of the fact that drop-outs have been excluded from this calculation.

#### **10.1.5 Aims in the analysis of data of Accounting I students**

The data relating to Accounting I students over the years 1988 to 1990 was analysed in order to provide answers to the following main questions:

1. Does the Accounting I group have a majority of NMA or MA students?
2. Is the drop-out rate of NMA students higher than that of MA students?

3. Are NMA drop-outs of a higher academic ability than MA drop-outs?
4. How does the academic quality of drop-outs compare to those students who remain in the Accounting I course up to the year-end?
5. Is there a lower pass rate for NMA students in Accounting I than for MA students?
6. Is the academic ability of NMA students who write the year-end examination equal to that of MA students?
7. Are the Accounting I year-end marks of NMA students significantly worse than those of MA students?
8. Is there any correlation between a student's Accounting mark at matric level and the Accounting I year-end mark?
9. Is previous exposure to Accounting at high school level of benefit to students of all levels of academic ability?

The early advantage enjoyed by students with high school exposure to Accounting has been well chronicled by Rowlands (1988), Bergin (1983), Baldwin and Howe (1982) amongst others. It is widely recognised that students with previous exposure to Accounting perform significantly better in the early part of the Accounting I course than do their counterparts without previous exposure. This fact is not at issue in this study.

Another question which is not a central issue in this study is whether or not a student's matric Accounting mark serves as a reliable predictor of the Accounting I mark at university. Nevertheless, the appropriate data was available and is discussed in this chapter.

#### **10.1.6 Allowance for differing abilities of students**

Previous studies tested for the possibility that the two subgroups of students (i.e. MA and NMA) could be of differing academic ability. This would obviously have an effect on the results achieved in Accounting at university level. At the time of writing, Bergin (1983) maintained that some educators believe that high school Accounting students were of low academic ability.

Rowlands used a Mann-Whitney test to identify differences in ability and found that in two out of the three years of his study (1985 and 1987) there was no significant difference in ability between the two sub-groups. In one year of his study (1986) he found pupils without previous exposure to Accounting to be of higher academic ability.

Statistical methods were also used in the study of Accounting I students at the University of Natal (Durban) in order to identify the relative academic ability of MA and NMA students. The results are discussed in this chapter.

The matric points achieved by a student were identified from student records and were used as the indicator of that student's academic ability.

The shortcomings of matric points as an indicator of ability and as a predictor of university success are appreciated by many university authorities, but over the three years of the study this system dictated the acceptance of applications for enrolment for the B.Com. degree and it has therefore been used as a basis of analysis in this dissertation.

The calculation of matric points as applied at the University of Natal are:

Symbol achieved in any subject	Points for Higher Grade subjects	Points for Standard Grade subjects
-----	-----	-----
A (80%-100%)	8	5
B (70%-79%)	7	4
C (60%-69%)	6	3
D (50%-59%)	5	2
E (40%-49%)	4	1

A pupil who achieves a B symbol in each of his six matric subjects earns 42 matric points. A pupil who achieves a D symbol in each of his six matric subjects, earns 30 matric points.

It has been noted in earlier chapters that, in the opinion of the NED Accounting Subject Committee and high school Accounting teachers, the academic quality of high school Accounting pupils in Natal has improved substantially in recent years. This has particularly been the case since the introduction of the new subject packages in Natal high schools (see Chapter 6).

One question which has not been covered by previous studies concerns the university progress made by the bright school pupil who has not undertaken Accounting as a matric subject. One of the myths surrounding high school Accounting is that the more intelligent pupil who might wish to pursue a career in Accounting has no need to undertake the subject at high school level because the high school course is repeated at university.

Another question which has not been raised previously is whether students at all levels of academic ability benefit equally from previous exposure to Accounting at high school level.

In order to provide answers to such questions, the student group was stratified into the following categories of academic ability, based on matric points:

- Category 1 : Students with matric points greater than or equal to 42
- Category 2 : Students with matric points from 38 to 41
- Category 3 : Students with matric points from 35 to 37
- Category 4 : Students with matric points from 32 to 34
- Category 5 : Students with matric points less than or equal to 31

It is hoped that, as a result of the categorisation of students along these lines, some view can be expressed on the contention that the more intelligent pupil who wishes to study Accounting at university level has no need to undertake the subject at high school level.

## 10.2 GENERAL CONCLUSIONS

It was found that the composition of the Accounting I student group has shifted over the three years to the extent that the vast majority of the group in 1990 (i.e. 75% of all students and 66% of NED students) consists of students who have previously studied Accounting up to matric level. Further research is advised in order to determine whether this is a continuing trend.

There was evidence that high school Accounting has a profound influence on the performance of students in Accounting I. This conclusion was reached in all three years of the study and in all categories of academic ability.

The calculation of drop-out rates, pass rates and average marks, as well as the application of statistical techniques, revealed that:

1. There has been a shift in the composition of the Accounting I student group to the extent that the vast majority of the group comprises students with previous exposure up to matric level.
2. MA students had significantly lower drop-out rates and significantly higher pass rates than NMA students.
3. Drop-outs from the MA group of students were of significantly lower academic ability in comparison to NMA drop-outs.
4. Amongst the MA group of students, the academic ability of drop-outs was significantly lower than that of MA students who wrote the year-end examinations. Conversely, amongst the NMA group of students, the academic ability of drop-outs was not significantly lower than that of NMA students who wrote the year-end examinations.
5. The pass rate of NMA students in Accounting I is significantly lower than that of MA students.
6. There is no significant difference in the overall academic ability of the MA group of students who wrote the year-end examinations in comparison to that of the NMA group.
7. MA students achieved significantly better Accounting I results than NMA students.

8. Even though the objectives in the teaching of high school Accounting and university Accounting differ, there is a correlation between matric Accounting results and Accounting I results.
9. Previous exposure to the subject is beneficial to students of all levels of academic ability, including those in the top academic bracket.

The detailed results are further explained below. These tend to support the findings of Mitchell (1988), Hutchinson & Hart (1972), Schroeder (1986) and Farley & Ramsay (1988).

### 10.3 COMPOSITION OF THE ACCOUNTING I STUDENT GROUP

Table 10.1 in Appendix B (page 201) indicates the composition of the Accounting I student groups over the years 1988 to 1990, covering all students with matric exemption through any education department. Students repeating the Accounting I course have been excluded from the study and the 1989 figures have been revised to take into account the transfers to the Business Accounting I course.

The table indicates the percentage of the group which has had previous exposure to Accounting up to matric level (the MA group) and the percentage of the group which has not had previous exposure to Accounting up to matric level (the NMA group).

Table 10.2 (page 201) reflects the analysis in respect of those students who undertook matric exemption through the NED only.

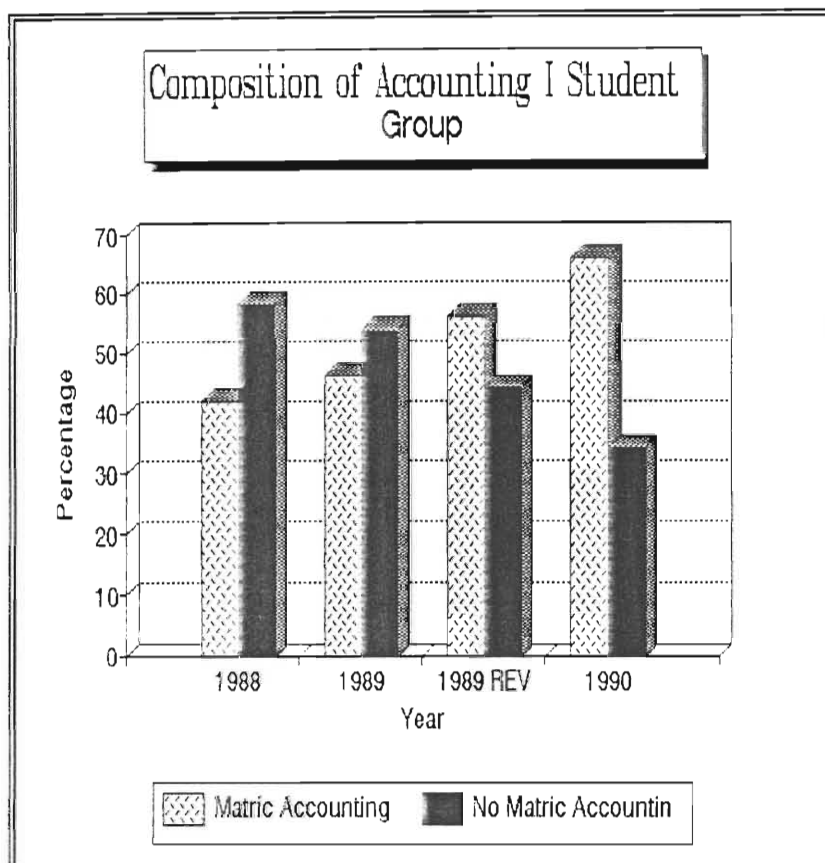
The results reflect a significant shift in the composition of the Accounting I group. When all students are considered, 50% of 1988 students had undertaken Accounting as a matric subject. In 1989 this figure rose to 63%, and in 1990 the percentage reached 75%.

A similar trend is noticed with regard to the NED students only. In 1988 MA students accounted for only 42% of the total group and this rose slightly to 46% at the start of the 1989 academic year. After the conversions to the Business Accounting I course took place during 1989, MA students then found themselves in the majority (56%). There were 68 conversions by NED products to the Business Accounting course. Of these, only 9 had had previous exposure to Accounting at high school level (i.e. MA students) while 59 had not undertaken Accounting as a matric subject (i.e. NMA students).

At the start of the 1990 academic year, the option of registering for Business Accounting I was open to students. This had a noticeable effect on the composition of the 1990 student group. The large majority (66%) comprised MA students, with a minority (34%) of NMA students. These statistics are in stark contrast to those of 1988.

The shift in the composition of the student group is represented graphically below. Note that the 1989 figures have been recalculated to allow for those students who converted to the Business Accounting I course.

Graph I.



Over the three years there was thus a distinctly noticeable trend towards a large majority of the student group comprising students with previous exposure to Accounting at high school level.

This may be attributed to the following factors:

1. School Accounting is now undertaken by brighter pupils as a result of the changes in school Accounting in Natal and the introduction of new subject packages. These brighter students are better equipped to obtain the required number of points to gain entrance into a B.Com. and will therefore tend to comprise a bigger percentage of the Accounting

I student group. In 1985 for the first time, the NED introduced the Science-Biology-Accounting course and the Science-History-Accounting course as formal subject packages for Standard 8 pupils. These courses gradually gained popularity amongst Standard 7 pupils making their choices of subject packages for matric purposes. The first matric pupils to have the opportunity to undertake these courses were a limited number in 1988, and by 1989 these courses had attracted a significant number of the brighter matric pupils.

2. Some NMA students tend to register for the Business Accounting I course rather than the Accounting I course because they perceive the Accounting I course as too difficult to undertake without previous exposure up to matric level. This opinion tends to be supported by the survey of Accounting I students, explained in Chapter 5.
3. Without previous exposure up to matric level, NMA students are not inclined to pursue a career in the Accounting profession and therefore are not required to follow the Accounting I course. This view tends to be supported by many leading accounting firms who regard high school Accounting as a valuable recruiting tool for the profession (refer to Chapter 9).

The problems faced by the Accounting I lecturers in the teaching of the two subgroups of students as a homogeneous unit should be carefully considered in the light of this information on the changing character of the Accounting I student group. A course which, for the most part, is designed to replicate high school Accounting must be seriously questioned as this would be

of relevance to only the minority of students in the Accounting I group i.e. those without matric Accounting. The repetition of topics covered at school level would tend to fuel the oft-heard complaint that students with matric Accounting tend to become complacent during their Accounting I year and develop bad study habits. Bergin (1983), Rowlands (1988) and others have mentioned this factor and Chapter 8 includes responses of other South African universities on this point.

#### 10.4 THE DROP-OUT RATE

Table 10.3 (page 202) indicates the drop-out rate for MA and NMA students from all education departments.

Drop-outs are classified as all those students who registered for the Accounting I course at the start of a year and wrote the first test of the year, but did not write the final examination at the end of the year. Students repeating the Accounting I course have been excluded from the study. The 1989 figures classify those students who converted to the Business Accounting I course as drop-outs. As this could distort the comparison, the 1989 figures have therefore been revised. It should nevertheless be noted that a significant number of the students who transferred to the Business Accounting I course might well have proved to be drop-outs had they not been given the option to convert.

The drop-out rates of all MA students varied from 8% in 1988 to 11% in 1989 to 5% in 1990 (when the 1989 figures are revised, the drop-out rate for MA students for that year is 4%). This is in stark contrast to the drop-out rates of all NMA students which varied from 22% in 1988

to 53% in 1989 to 27% in 1990 (when the 1989 figures are revised, the drop-out rate for NMA students for that year is also 27%).

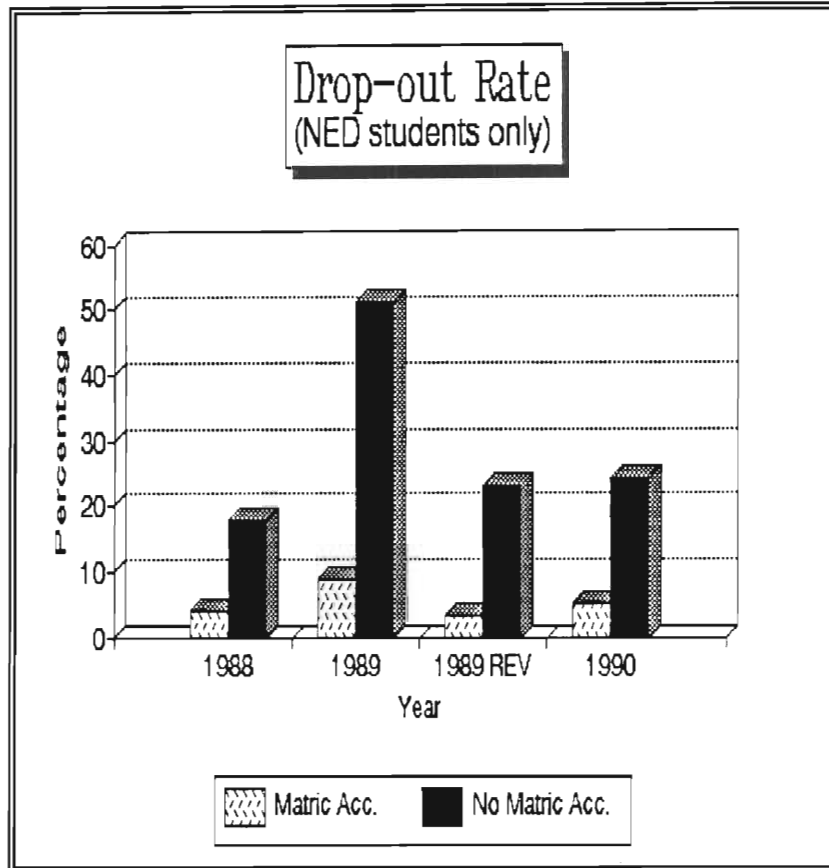
Table 10.4 (page 202) indicates drop-out rates in respect of students who undertook matric exemption through the NED only.

The drop-out rates of MA students who are products of the NED system varied from 4% in 1988 to 9% in 1989 to 5% in 1990 (when the 1989 figures are revised, the drop-out rate for MA students for that year is 3%). The contrast to the drop-out rates of NMA students from the NED system is also significant. The drop-out rates of these students varied from 18% in 1988 to 51% in 1989 to 24% in 1990 (when the 1989 figures are revised, the drop-out rate for NMA students for that year is 23%).

The comparison of drop-out rates of NED pupils is represented graphically below:

P.T.O. Graph II...

Graph II.



The study revealed that, in each of the three years, the drop-out percentage among NMA students is between 3 and 5 times higher than that among MA students. The introduction of the Business Accounting course appears to have had little effect on the drop-out percentage for NMA students, which has fluctuated between 18% and 51% for the three years. The drop-out percentage for MA students who are products of the NED system has remained consistently well below 10%.

Baldwin & Howe found no difference in drop-out rates in their study and they make the point that "essentially, the high school bookkeeping group is 'pre-screened'. That

is, those students having neither aptitude nor interest in accounting would not presumably continue its study" (1982, 625).

It should, nevertheless, be acknowledged that to utilise the Accounting I university course as a "screening" device is an extremely expensive strategy as far as the student is concerned, both from a monetary and a time point of view, and is also academically undesirable, if not unacceptable. The Baldwin & Howe study has since been criticised by Schroeder (1986) for not taking into account the length of previous exposure to Accounting at high school level. This factor also brings into question Baldwin & Howe's conclusions on drop-out rates.

Bergin (1983) found that the drop-out rate was higher for students with no previous exposure to Accounting (26% as opposed to 10%). Rowlands (1988) also recognised the lower drop-out potential of students with matric Accounting, but was not able to incorporate this into his statistical comparison of the performance of the two groups of students. It must be noted again that the Accounting syllabus in South African schools has undergone major changes since Rowlands' study and this might well have a favourable effect on subsequent drop-out rates of students with matric Accounting.

#### 10.5 THE DROP-OUT RATE BY CATEGORY OF STUDENT

The study also took account of the differing levels of abilities of the student group. It was felt that there was a need to identify whether the drop-out rates as outlined above applied to all levels of student ability or whether the lower levels were more affected.

The student group was divided into 5 categories, based on matric points achieved, representative of their level of ability. Table 10.5 (page 203) provides the results. Only NED pupils are considered in this analysis, in view of the fact that this is the main thrust of the study and that differing standards between examining authorities would introduce a further variable.

It was seen that the trends in drop-out rates as analysed between MA and NMA students are also present when the student group is subdivided into levels of ability.

The top academic category of student (42 matric points and more) represents the top 13% to 18% of the Accounting I student group. Significantly, in this category, there were no drop-outs of MA students over the three years. The drop-out rate of NMA students in this category, however, varied from 9% to 25%. Over the three years of the study, 11 NMA students in the top category dropped out of the Accounting I course or converted to Business Accounting I.

It has been mentioned earlier in this dissertation that one of the myths of high school Accounting is that the bright pupil who might wish to follow a career in Accounting need not undertake Accounting as part of his matric package because he will have the ability to make up any backlog within a few months at university. The results of this study indicate that in the Natal context, this myth cannot be held to be true.

In studying the relative drop-out rates of each of the lower academic categories of student, a similar trend is apparent.

For students in the second category (38 to 41 points), over the three years of the study there were 3 drop-outs among MA students, compared to the 24 among NMA students. This is despite the fact that in 1990 the number of MA students in this category was more than double the number of NMA students. Expressed as percentages, the drop-out rates for MA students in this category varied over the three years from 3% to 5%, compared to the drop-out rates of NMA students which varied from 17% to 42%.

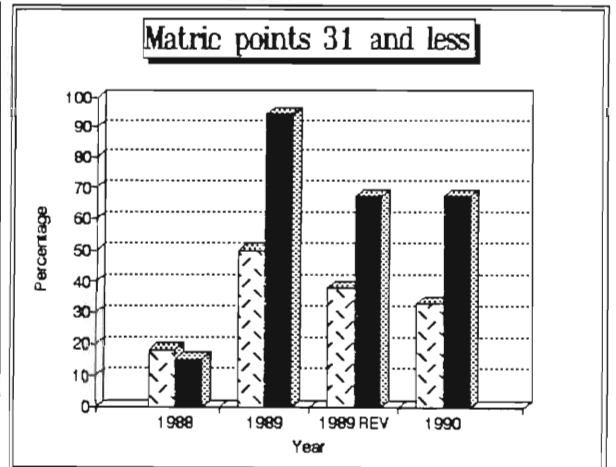
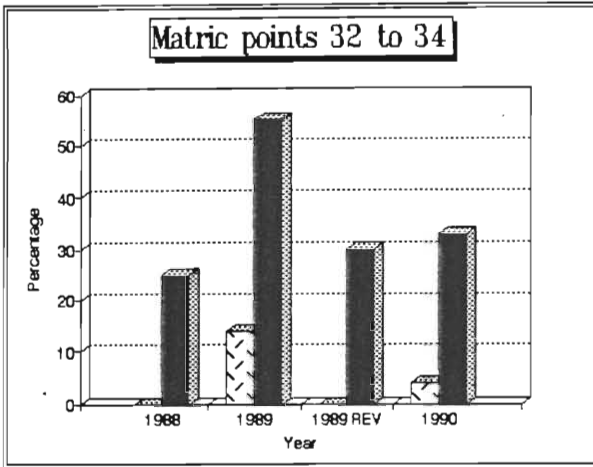
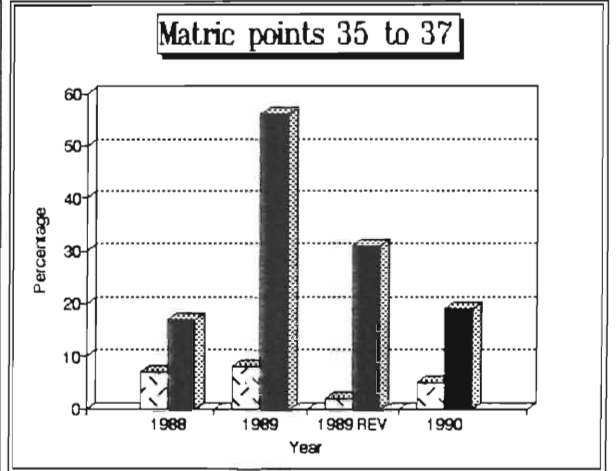
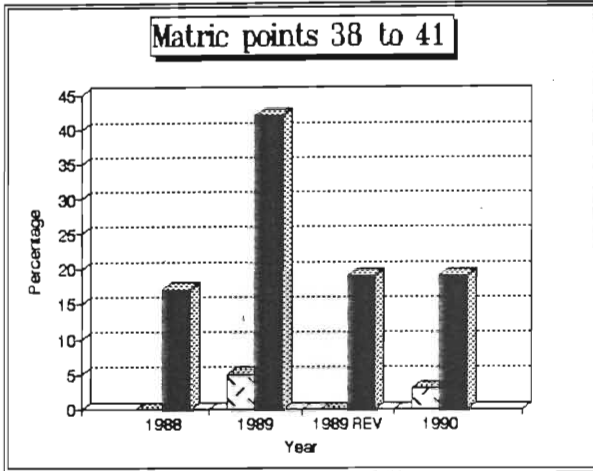
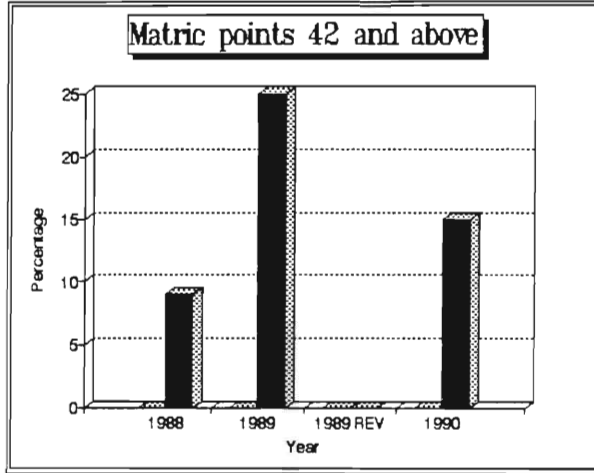
In the third (35 to 37 points) and fourth (32 to 34 points) academic categories, the comparison between MA and NMA students still holds. Drop-outs among MA students in these two categories totalled 11 over the three years, while there were 73 drop-outs among NMA students, despite the fact that NMA students represent a decreasing proportion of the total student group.

In the fifth category (31 points and less), the group is not sufficiently large to make definite conclusions. There were 61 students in this category in 1988, but by 1990 the number of students in this category had dropped to 9. However, MA students in this group generally still had lower drop-out rates than their NMA counterparts.

These trends are represented graphically below:

P.T.O. Graph III...

Graph III. Drop-out Rate by Category (NED students only)



Matric Accounting



No Matric Accounting

The conclusion reached is that while drop-out rates in general might be within the limits acceptable to the University of Natal, the vast majority of these drop-outs are students without previous exposure to high school Accounting. This is despite the fact that the Accounting I course is designed in such a way as to cover all the necessary basics covered at high school level. The tailoring of the course to meet the needs of NMA students does not appear to narrow the gap in drop-out performance of these students in comparison to their MA counterparts, at all levels of academic ability. This is an important factor which should receive the attention of the University of Natal.

#### 10.6 THE ACADEMIC QUALITY OF DROP-OUTS OF MA AND NMA GROUPS

Over the three years of the study, 16 MA students dropped out of the Accounting I course, while 72 NMA students did likewise. These figures exclude those students who transferred to the Business Accounting I course in 1989.

An unpaired T-test was applied in order to determine whether drop-outs of the two groups were of equal academic ability, matric points being used as the basis of comparison. Students who transferred to the Business Accounting course in 1989 were not treated as drop-outs from Accounting I owing to the possibility of valid reasons for their conversion and the possible distortion of the results of the test.

The test revealed that MA students who dropped out had significantly lower matric points than NMA students who did not complete the course (Table 10.6, page 204).

The test results are summarised as follows:

Mean matric points score of drop-outs in the MA group	31,0 ± 5,2
Mean matric points score of drop-outs in the NMA group	35,2 ± 4,2

$p < 0,001.$

A matric points score of 31 (the MA drop-out mean) would be obtained by a pupil who, for example, achieves five D-symbols and one C-symbol in the matric examination. A matric points score of 35 (the MA drop-out mean) would be obtained by a pupil who, for example, achieves five C-symbols and one D-symbol in the matric examination. The points requirement for entry to the B.Com. degree at the University of Natal (Durban) was set at 32 points in 1988 and was increased to 34 points from 1989. However, in the event of an under-subscription to the degree in any one year, students have been accepted with points lower than the minimum requirement, subject to the approval of the Dean of the Faculty.

The conclusion reached is that the student of relatively low academic ability (e.g. 31 matric points) who has undertaken Accounting up to matric level, is likely to survive the Accounting I course to the end of the academic year. The student without matric Accounting, however, will need to possess relatively high academic ability (over 35 points) to have a reasonable assurance of being in a position to write the year-end examination.

## 10.7 THE ACADEMIC QUALITY OF DROP-OUTS COMPARED TO SURVIVORS OF THE ACCOUNTING I COURSE

A further statistical analysis was done in order to compare the academic ability of drop-outs in relation to the academic quality of those students who did not drop out. This was done separately for both MA and NMA students in order to ascertain whether drop-outs comprised those students at the lower end of the scale of academic prowess or whether drop-outs were scattered across the spectrum of academic ability. The results are set out in Table 10.7 (page 205).

For MA students, there was a large difference between the mean matric points score of drop-outs (31,0 points) and the mean matric points score of MA students who wrote the year-end examinations (37,3 points), at a high level of significance ( $p < 0,001$ ).

For NMA students, there was a small difference between the mean matric points score of drop-outs (35,2 points) and survivors of the course (36,5 points), which was not significant ( $p = 0,053$ ). It was therefore evident NMA drop-outs are of similar academic ability to NMA survivors of the course.

For NMA students it appears that academic ability alone is not a major assurance of a student's ability to survive the Accounting I course at the first attempt.

## 10.8 THE PASS RATE

The study revealed that the vast majority of MA students succeeded in passing Accounting I at the first attempt, whereas the vast majority of NMA students failed the course at the first attempt.

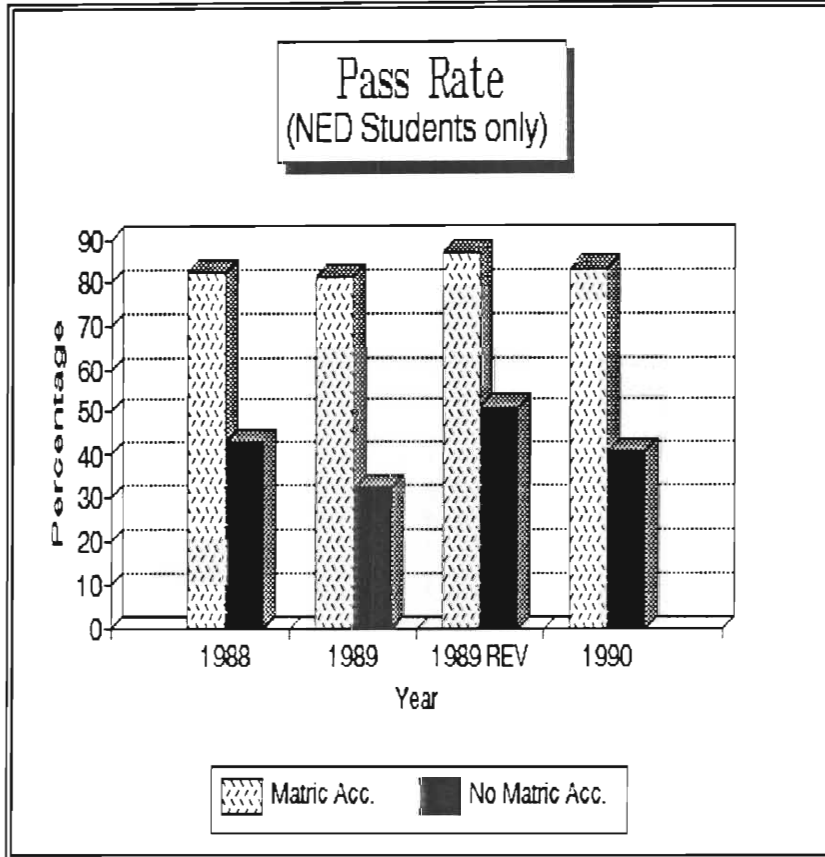
Table 10.8 (page 206) indicates the pass rate for MA and NMA students from all education departments. The pass rate for MA students over the three years varied from 71% to 76%, while that of NMA students compared most unfavourably, varying from 27% to 43%.

Table 10.9 (page 206) indicates the pass rate in respect of students who undertook matric exemption through the NED only. The pass rate of MA students who had matriculated through the NED was consistent over three years, being between 82% and 87%. The performance gap between MA and NMA students was seen to be wider when one considers only NED pupils, with the pass rate of NMA students who were products of the NED system fluctuating between 32% and 51%.

The results are represented graphically below:

P.T.O. Graph IV...

Graph IV.



The difference in pass rate between MA students and NMA students at the first attempt was a startling feature of the study. Although it might reasonably be expected that the pass rate of MA students would be higher than that of NMA students, the extent of the difference was not expected. If one considers NED students only, the pass rate for MA students has always exceeded 81%. The pass rate for NMA students, on the other hand, has not exceeded 43% over the three years.

## 10.9 THE PASS RATE BY CATEGORY OF STUDENT

The study also took account of the differing levels of abilities of the student group, based on the five student categories outlined earlier. It was felt that there was a need to identify whether the pass rates as reflected above applied to all levels of student ability or whether the lower levels were negatively affected.

Table 10.10 (page 207) reflects pass rates according to the five categories, for NED students only.

It was apparent that the trends in pass rates as analysed between MA and NMA students are prevalent also when the student group is subdivided into levels of ability.

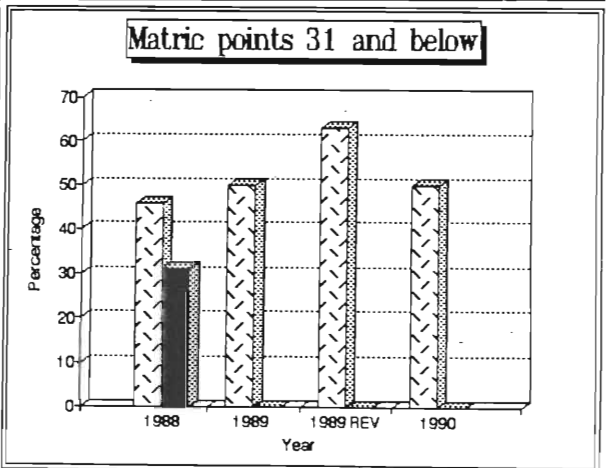
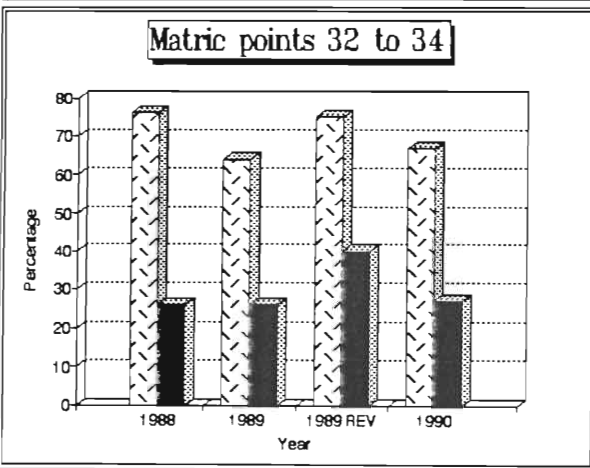
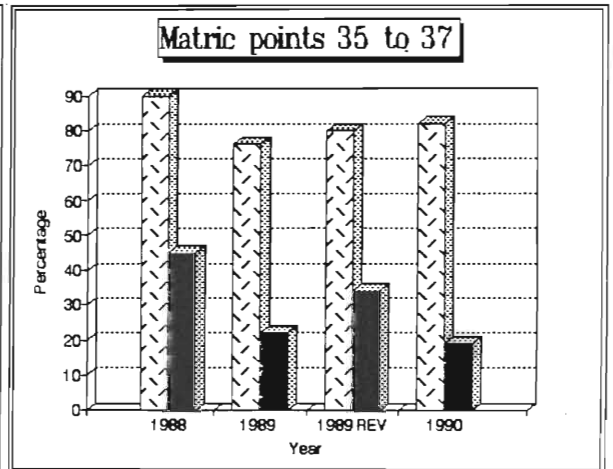
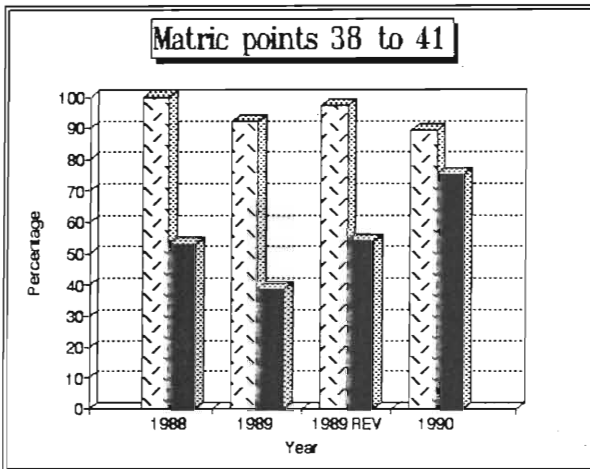
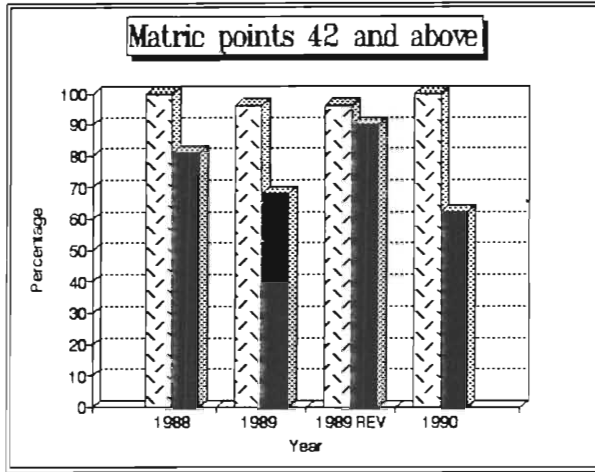
In the top category (42 points and more) the pass rate of MA students over the three years was either 100% or 96%. The pass rate of NMA students in this category varied from 62% to 81%. The low rate of 62% was achieved in 1990. In 1989, the pass rate of NMA students in this category was 68% before adjusting for the changes to the special Accounting course. 7 NMA students in this category changed course whereas there were no changes of course by MA students in this category. Over the three years of the study, only 1 MA student in the top category did not achieve a pass in Accounting I at the first attempt, compared to 18 NMA students.

When one considers the first three categories (35 points and more), MA students consistently achieved pass rates of more than 80%. The pass rates of NMA students in any of these three categories, however, dropped to as low as 19% in 1990.

It was evident that in each category the pass rates are significantly higher for MA students as opposed to NMA students. In the fifth category (31 points and less), the group is not sufficiently large to make definite conclusions. Approximately half of the MA students in this category did managed to achieve a pass, while in the last two years out of the 19 NMA students in this category, not a single NMA student was able to pass at the first attempt.

These results are represented graphically below.

Graph V. Pass Rate by Category (NED students only)



 Matric Accounting
  No Matric Accounting

## 10.10 AVERAGE MARKS ACHIEVED

Table 10.11 (page 208) indicates the average marks achieved by MA and NMA students from all education departments with drop-outs having been awarded 0%. Whilst the validity of this may be questioned, it was felt that to ignore drop-outs would lead to a bias in the results of the study. The ignoring of drop-outs would result in a comparison of MA students and NMA students who were able to survive to the end of the course. From the analysis of drop-out rates as covered earlier in this chapter, this would entail eliminating a significant proportion of the NMA group without a corresponding change in the characteristics of the MA group. It was felt that the achievement level of all students who started the course was to be taken into account in order to arrive at proper conclusions as to the relevance or otherwise of high school Accounting.

However, it is possible that there might be genuine reasons for drop-out or course changes other than inability to cope with the course. It was felt that these cases could reasonably apply equally to the MA and NMA groups. The relative difference in the results between MA students and NMA students due to these genuine reasons should therefore be minimal.

The study revealed that the average marks of MA students are significantly higher than those of NMA students.

If one considers all students, MA students achieved average marks over the three years in the narrow range from 52% to 59%. The average marks of NMA students fluctuated from 23% to 38%.

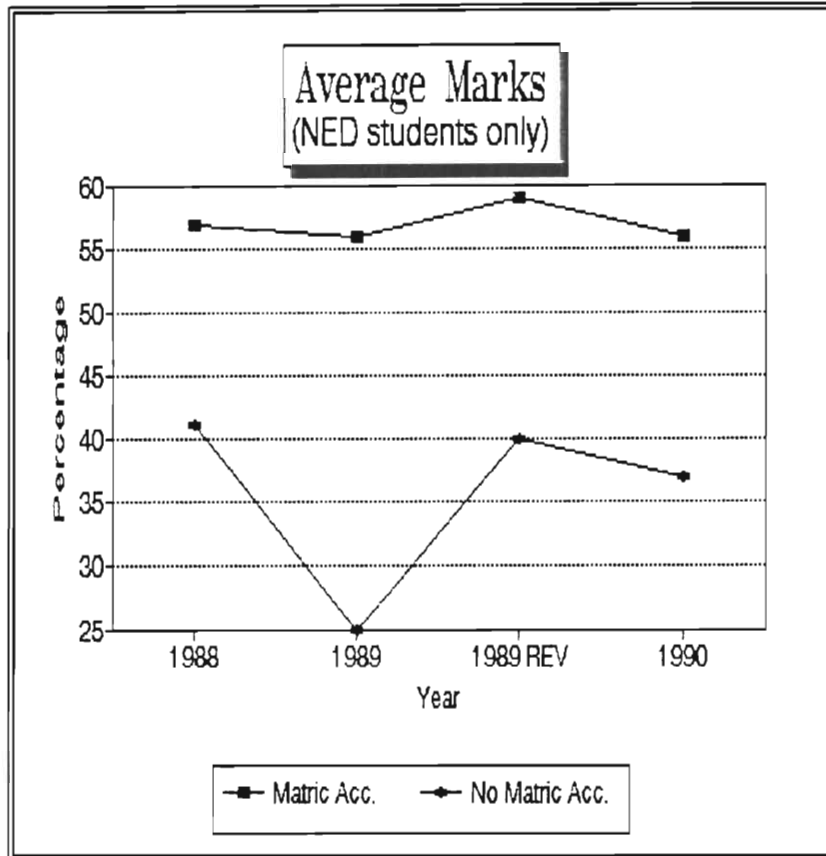
If one considers only NED students (Table 10.12, page 208), the average marks of MA students over the three years were in the narrow range from 56% to 59%. In contrast, the average marks of NMA students varied from 25% to 41%. The low of 25% was achieved in 1989, before adjustment of the data to take into account conversions to the Business Accounting I course. After adjustment, this average mark rises to 40%.

The figures therefore reveal that the average NMA student who starts the course will not pass at the year-end. The same cannot be said, however, for MA students. If one considers NED students only, the average mark for MA students has always exceeded 56%. The average mark for NMA students, on the other hand, has fluctuated from 25% to 41%.

The average marks achieved over the three years of the study by NED students are represented graphically below:

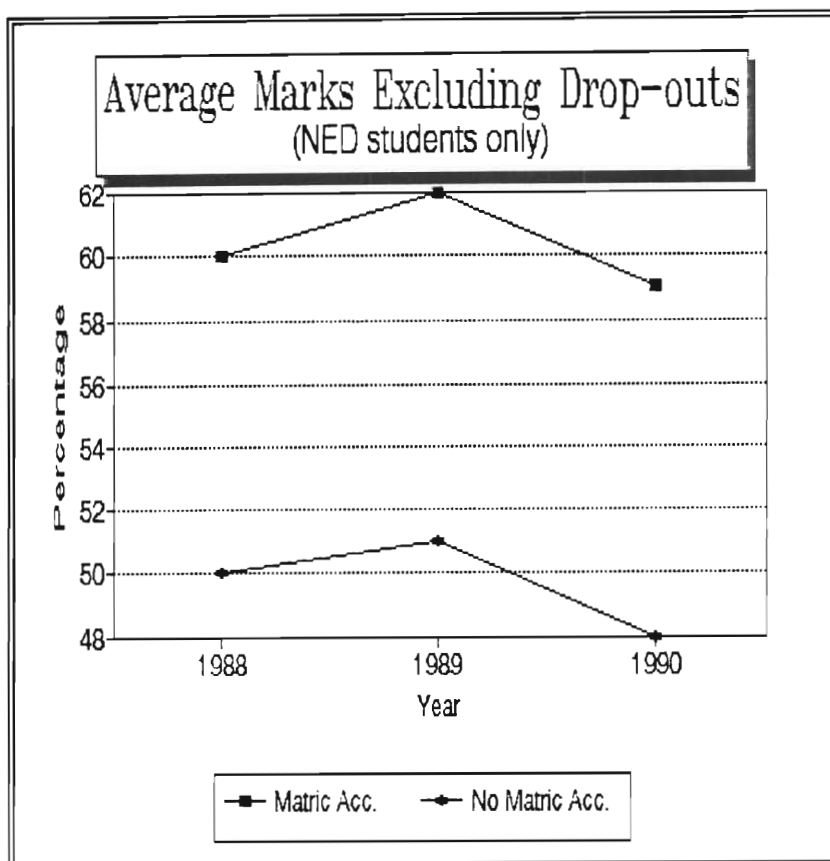
P.T.O. Graph VI...

Graph VI.



Due to the possible questioning of the awarding of a mark of 0% to students who dropped out or transferred to Business Accounting I, the data has been adjusted to eliminate the effect of these students. The results are shown in Table 10.13 (page 209). Owing to the significantly higher number of drop-outs among NMA students, the elimination of these students has more of a favourable effect on the average marks achieved by this group of students. Nevertheless, the revised average marks of NMA students still compares unfavourably to that of the MA group, with approximately a 10% differential in each of the three years.

Graph VII.



The results are consistent with those of Farley and Ramsay (1988) and Schroeder (1986). The fact that MA students in the South African context have been exposed to at least a four-year school Accounting syllabus explains the differences between the findings of this study and those of Bergin (1983) and Baldwin & Howe (1982).

These results also support those of Mitchell in his conclusion that "it can be potentially rewarding for the first level accounting student to have taken accounting to Higher Grade standard at school" (1985, 85). A factor which should also be considered, as outlined by Mitchell

in 1988, is that pupils with greater numerical ability are possibly more inclined or motivated to undertake Accounting at school level, and this is possibly reflected in the results obtained for first year Accounting at university level. In other words, the MA group might possess greater numerical ability than the NMA group.

It is for this reason that this dissertation has allowed for the stratification of students according to matric points, which incorporate a certain numerical component (i.e. Mathematics and Physical Science).

#### 10.11 AVERAGE MARKS BY CATEGORY OF STUDENT

The study also took account of the differing levels of abilities of the student group, based on the five student categories outlined earlier in this chapter. It was felt that there was a need to identify whether the average marks as reflected above applied to all levels of student ability or whether the lower levels were more negatively affected.

Table 10.14 (page 210) reflects average marks according to the five categories. Only NED students are reflected in this table and drop-outs are taken into account as part of the original student group, for a more relevant comparison.

It was evident that the difference in the performance of MA and NMA students is noticed also when the student group is subdivided into levels of ability.

In the top academic category (42 points and more), MA students achieved average marks between 70% and 72% over

the three years. NMA students in this category, however, achieved average marks between 45% and 61%. The low of 45% is calculated on the NMA group before allowing for changes to the Business Accounting I course. The high of 61% was calculated after allowing for those changes.

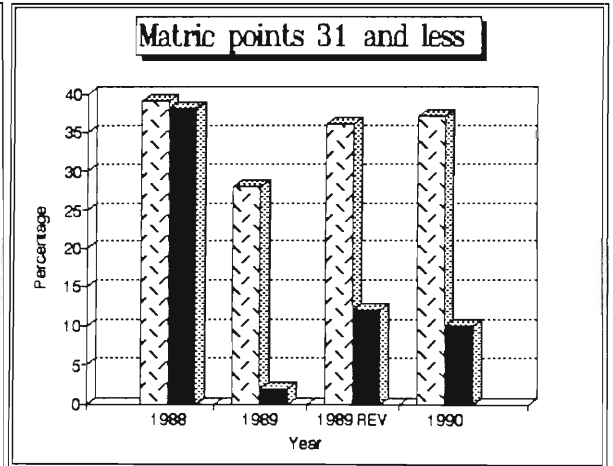
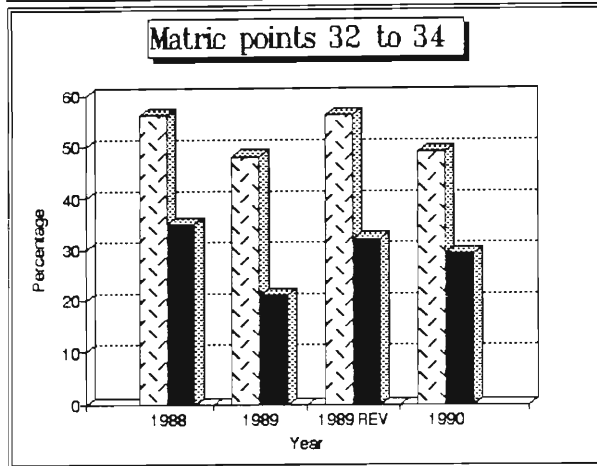
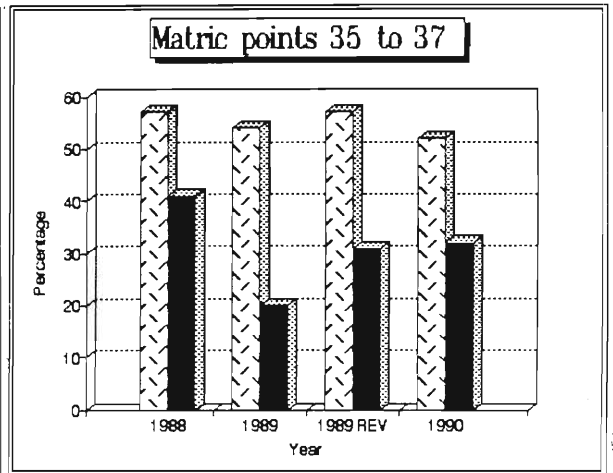
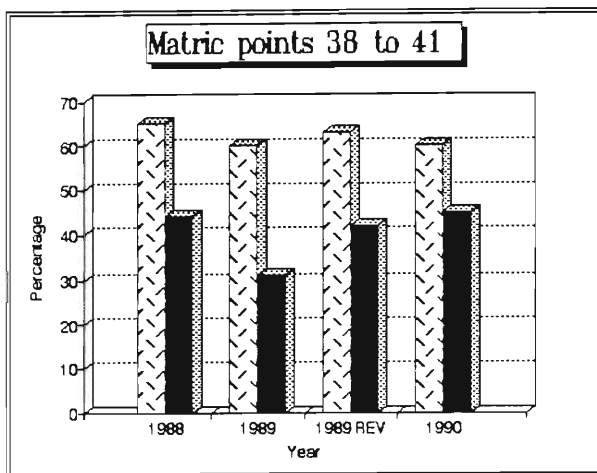
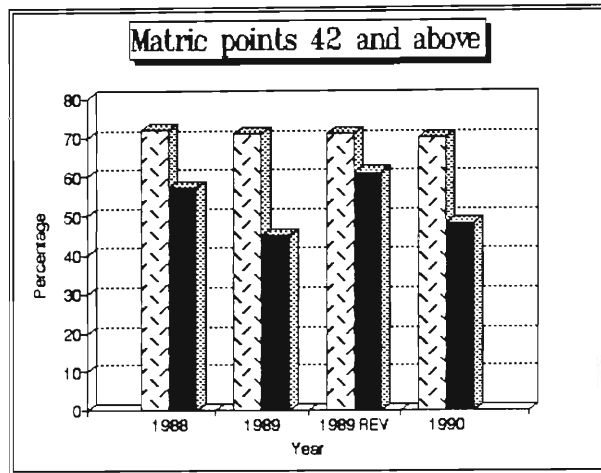
It is significant that, in 1990, the average mark of NMA students in this top category of academic ability is only 48% i.e. below the minimum required to pass the course.

It was also evident that MA students of 35 points and more, consistently over the three years achieved an average mark greater than the pass mark of 50%. NMA students in any category were not able to achieve an average mark consistently over 50%. It is only in 1988 that NMA students of 42 points and more were able to achieve an average exceeding the pass requirement of 50%. NMA students of 41 points or fewer were not able to achieve an average mark of 50% in any one year.

The closest differential between the average marks of both groups was in the top category (42 points and more). The difference in average marks in this category was 15% in 1988, 26% in 1989 before adjustment for course conversion, 10% after adjustment, and 22% in 1990. The general trend was for the gap to widen in the lower categories of academic ability.

The results are represented graphically below:

Graph VIII. Average Marks by Category (NED students only)



 Matric Accounting
  No Matric Accounting

## 10.12 THE ACADEMIC QUALITY OF MA AND NMA GROUPS

It has been explained that matric points were used as the basis of identifying the academic quality of students.

Any difference in the mean Accounting I marks of MA and NMA students could, conceivably, be explained by differences in their academic prowess. It was therefore decided to perform an unpaired T-test on the points obtained by the two groups of students who wrote the year-end examinations. The results are indicated in Table 10.15 (page 211).

The test revealed that there was no significant difference between the two groups with regard to their overall academic achievement at school as assessed by their matric points score. The mean points score of MA students considered as a composite unit ( $37,3 \pm 4,6$ ) was matched by that of the NMA group as a composite unit over the three years ( $36,5 \pm 5,5$ ).

## 10.13 STATISTICAL COMPARISON OF ACCOUNTING I MARKS OF MA AND NMA STUDENTS

Student's Unpaired T-test was applied in order to compare the Accounting I results of MA and NMA students. For the purposes of this test it was necessary to exclude drop-outs and transfers to the Business Accounting I course. As explained before, to award a mark of 0% to these students would distort the results of the test. It should be remembered, however, that the analysis of drop-out rates earlier in the chapter revealed the vast majority of drop-outs to be NMA students. The inclusion of drop-

outs would therefore have had a more negative effect on NMA students than MA students.

The unpaired T-test on Accounting I results revealed that the results of MA students were significantly better than those of NMA students, despite the exclusion of the drop-outs. This is true over all three years of the study when Accounting I results are considered as a composite unit, as reflected by the following scores:

Mean of the MA group (1988-90)	60,5	±	10,9
Mean of the NMA group (1988-90)	50,1	±	13,4
p < 0,001			

Similar differences were evident when each year was considered individually (Table 10.16, page 212). The mean of the MA group over the three years varied from a low of 59,1% (in 1990) to a high of 62,0% (in 1989), while the mean of the NMA group was consistently well below this, varying from a low of 48,0% (in 1990) to a high of 51,3% (in 1989). All results were obtained at high levels of significance ( $p < 0,001$ ).

The inclusion of drop-outs in this analysis would have accentuated these differences.

#### 10.14 MATRIC ACCOUNTING MARK IN RELATION TO THE ACCOUNTING I MARK

There appears to be much doubt as to whether the matric Accounting mark can serve as a predictor of the Accounting I mark subsequently achieved by a student at university level.

Although there is a great deal of common ground between the high school Accounting course and the Accounting I course, the point has been made in previous chapters that the major objective of the high school Accounting course is not necessarily the nurturing of prospective Chartered Accountants. The NED Subject Committee and most teachers have been sensitive to the needs of those pupils who might eventually follow alternative careers and have attempted to teach the subject in as broad a sense as possible, within the constraints of the syllabus.

In Chapter 4 it was noted that only 19% of high school Accounting pupils surveyed would be furthering their studies through a B.Com. or B.Acc.

The course content of high school Accounting, although containing many concepts in common with the university course, is not solely geared towards the pupil with aspirations to a B.Com. and the contention that the high school Accounting result should predict the university result should therefore not be a central issue in this study.

Nevertheless, the predictive ability of the high school Accounting mark is a point which is often raised in academic circles. As the relevant data was available, a regression analysis was applied to ascertain the correlation, if any, between a student's matric Accounting mark and Accounting I mark. Drop-outs were excluded in order to prevent distortion of results.

Matric Accounting symbols were assigned numeric values on the following basis:

$$A = 80\% \quad B = 70\% \quad C = 60\% \quad D = 50\% \quad E = 40\%.$$

Over the three years of the study, there were no complications of students having undertaken Accounting at matric level on the Standard Grade.

Matric Accounting marks were correlated to Accounting I results for the three years as a whole and separately. Results were expressed in terms of Pearson's Correlation Co-efficient.

It was found that there was a significant correlation between Accounting results obtained by students in their matric year and in their first year at university level. When results for the three years are analysed as a composite unit, this correlation is evidenced by the following result:

$$r = 0,55 \quad p < 0,001$$

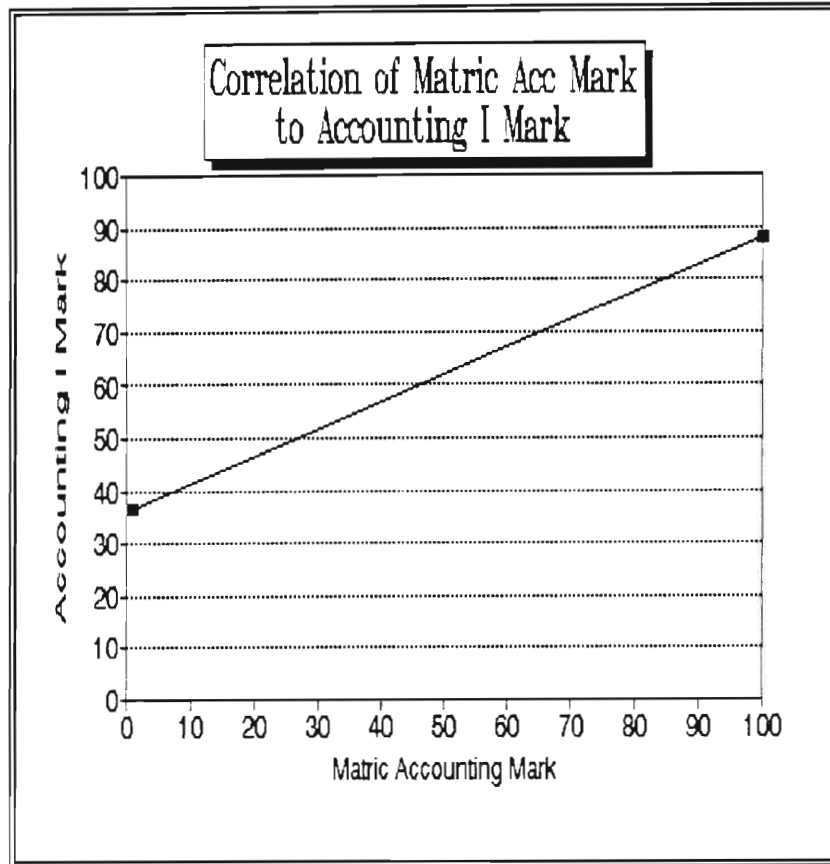
This relationship was also evident when each of the three years of the study were considered individually (Table 10.17, page 213).

For the three years as a whole, the relationship between the Accounting I result and the matric Accounting mark is represented by:

$$y = 0,52x + 36$$

The line of best fit is represented graphically below.

Graph IX.



A factor to be borne in mind, however, is that correlation of matric results to university results should be treated with a great deal of circumspection due to the application of the Joint Matriculation Board norms to the raw scores of candidates writing the provincial Senior Certificate examinations.

#### 10.15 CONCLUSION

It appears that pupils who study Accounting at school up to matric level are more inclined to choose a career in Accounting and hence Accounting I as a subject at university level. This trend has been especially prevalent since the introduction of the Business

Accounting course at the University of Natal (Durban) in 1989. The vast majority of Accounting I students in the third year of the study (1990) comprised those with previous exposure to the subject up to matric level.

The statistical analysis of matric points of students, nevertheless, revealed no significant difference in the academic abilities of the two sub-groups of students who wrote the year-end examinations.

Over the three years of the study, it was evident that the student with previous exposure to Accounting at high school level is at a significant advantage in comparison to the student without previous exposure. This advantage is illustrated through comparison of drop-out statistics and pass rates as well as through the results achieved in the Accounting I course, despite the fact that there was no significant difference in the academic ability of the two sub-groups of students.

In all the above analyses MA students performed significantly better than NMA students. The fact that drop-outs were excluded in the unpaired T-tests applied to Accounting I marks serves to accentuate the relative advantage enjoyed by those students who had undertaken the subject at matric level.

The study revealed that drop-outs without previous exposure to Accounting at high school level were of significantly higher academic ability than those with previous exposure to the subject.

Moreover, the academic quality of NMA drop-outs was commensurate with the academic ability of NMA students

who remained in the course until the end of the year. On the other hand, the academic quality of MA drop-outs was significantly lower than that of MA students who remained in the course.

This suggests that for NMA students, academic ability alone is not an assurance for success in Accounting I and it therefore appears that the undertaking of Accounting up to matric level is a significant input for success in Accounting I at university level.

There was evidence that this is true for students of all levels of academic ability. A significant number of students of high academic ability who have not undertaken Accounting as a matric subject either failed or dropped out of the Accounting I course, whereas this was not the case for students with matric Accounting.

It also appears that the new subject packages offered by the NED have had an effect on the quality of pupil undertaking Accounting as a matric subject, while the upgraded approaches to the teaching of the subject in Natal schools might have assisted MA students in becoming better equipped for the purposes of Accounting I at university level.

# CHAPTER 11

## SURVEY OF 1991 POST-GRADUATE DIPLOMA IN ACCOUNTING STUDENT GROUP

### 11.1 BACKGROUND

The question was posed to university Accounting lecturers and to the Training Officers of accounting firms as to whether the matric Accounting pupil is more likely to proceed through to a post-graduate Diploma in Accounting in comparison to the non-Accounting matriculant. Although certain individuals had clear-cut opinions, there was no consensus amongst either the lecturers or the accountants on this question.

As the answer to this question is of significance to the central issue in this study, it was therefore decided to investigate the 1991 Dip.Acc. group. This Dip.Acc. group contains those students who would have matriculated in 1987 and started their B.Comm. in 1988, the first year covered in the analysis of marks in Chapter 10.

### 11.2 RESEARCH METHODOLOGY

A questionnaire was presented to the 1991 Dip.Acc. group at the University of Natal (Durban).

The questionnaire is provided in Appendix A to this dissertation (page 182).

The purpose of the questionnaire was to ascertain whether or not matric Accounting had any influence on the likelihood of a student following through to a Dip.Acc. or C.T.A.

In Chapter 10 (section 10.3), the 1988 Accounting I group was analysed to establish the proportion of students who had undertaken Accounting as a matric subject and the proportion who had not. The 1991 Dip.Acc. group was analysed along the same lines in order to ascertain whether there has been any shift in the mix of the group. This analysis could provide clues as to whether or not the matric Accounting pupil has a better likelihood of reaching the Dip.Acc. stage.

An analysis was also done in order to ascertain the stages at which the Dip.Acc. students had repeated an Accounting course in their B.Com. degree. It must, however, be remembered that students who formed part of the 1988 Accounting I student group and who have repeated Accounting at some stage during their B.Com. will not have reached the Dip.Acc. stage by 1991. Further investigation on this topic is therefore necessary before definite conclusions can be reached on the frequency with which students repeat an Accounting course in their B.Com.

### 11.3 GENERAL CONCLUSIONS

There has been a shift in the composition of the student group when comparing the 1988 Accounting I group to the 1991 Dip.Acc. group. The Dip.Acc. group comprises a majority of students who had studied Accounting up to matric level, whereas this was not the case in the Accounting I group of 1988. This shift is even more pronounced when one considers only NED matric pupils.

The reasons for this cannot be determined conclusively at this stage, but a possible explanation could be that the student who is determined to obtain a C.A. qualification is more likely to have chosen Accounting in his school subject package, if offered at his school, and this would account for the reported change in the composition of the student group. Also, the student with an aptitude for Accounting is likely to have chosen the subject as part of his matric subject package, if offered at his school.

It is also possible that the initial advantage enjoyed in the Accounting I year by the student with matric Accounting helps him finally to see the course through to the end, and that the student without matric Accounting is more likely to change his career objectives or to drop out (see Chapter 10) as a result of problems experienced by him in Accounting I at university level. It has been noted at various stages in this dissertation that Accounting I serves as the screening device for students without matric Accounting, whereas school Accounting serves as the initial screening device for pupils with matric Accounting.

The analysis of Dip.Acc. students who matriculated in 1987 reflects those students who proceeded through to a Dip.Acc. without repeating a single year of Accounting. The majority of these students now consists of students with matric Accounting.

In Chapter 10 it was noted that the mix of the Accounting I student group has changed markedly over the three years 1988 to 1990, with a number of possible reasons provided. The 1990 Accounting I group, for example, consists of 75% of students with matric Accounting as opposed to the 50% in 1988. It will be necessary to follow this 1990 Accounting I group through to their Dip.Acc. year before any definite conclusions can be reached.

In analysing whether or not students had repeated either Accounting I, II or III, the early advantage of the student with matric Accounting is noticed once again with 3% of matric Accounting students repeating Accounting I as opposed to 19% of those without matric Accounting. There appears to be no difference in considering percentage repeats in the Accounting II year, while in the Accounting III year, the results swung to 16% repeats for those with matric Accounting compared to 7% of those without matric Accounting.

It is probably results such as these which lead one to question the relevance of school Accounting to the later stages of study at university level. What must be considered, however, is the fact that the early disadvantages as perceived by students without matric

Accounting tend make them more susceptible to drop-out at an early stage. Students with matric Accounting appear to be more likely to survive the Accounting I year and can be expected to meet their first real difficulties or challenges in the subject at second or third year level.

It is possible that a student who survives the initial hurdle of Accounting I is more likely to be motivated to see the B.Com. (with Accounting III) through to its conclusion. A student failing Accounting I, on the other hand, might be motivated into a change of career.

#### 11.4 DETAILED RESULTS

Table 11.1 in Appendix B (page 214) contains a summary of the analysis of the 1991 Dip.Acc group in comparison to the 1988 Accounting I group. All students are included (i.e. any matriculation examining authority).

In 1988, the Accounting I group consisted of 50% with matric Accounting and 50% without. The 1991 Dip.Acc. group, however consists of a majority of students with matric Accounting (64%) as opposed to a minority (36%) without matric Accounting.

Table 11.2 (page 214) contains an analysis of the 1991 Dip.Acc. group, limited to those students who matriculated under the NED. The swing in the percentage mix is even more pronounced for this group of students. In 1988, the Accounting I student group of former NED pupils consisted of a minority of 42% with matric Accounting compared to 58%

without matric Accounting. When one considers NED students only, the 1991 Dip.Acc. group consists of a significant majority (61%) with matric Accounting as opposed to 39% without matric Accounting. This shift is reflected in the graph below:

Graph X.

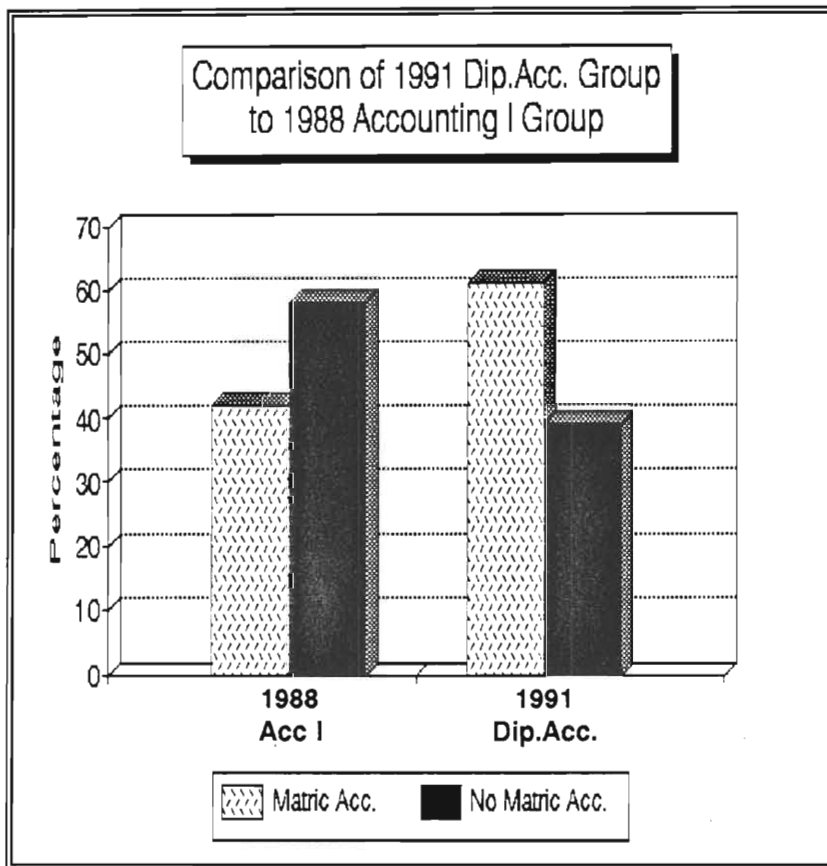


Table 11.3 (page 215) contains a similar summary to Table 11.2, but is restricted to NED students who matriculated in 1987 only. A similar shift is evident.

Table 11.4 (page 215) summarises the progress of the Dip.Acc. student group over their previous years of study at University level.

There were 75 students in the 1991 Dip.Acc. group who had undertaken Accounting as a matric subject as opposed to 42 who had not. Of the 75 matric Accounting students, 2 repeated Accounting I (i.e. 3%). Of the 42 students without matric Accounting, 8 had repeated Accounting I (i.e. 19%).

The higher drop-out rate for students without matric Accounting has led to the change in the mix of the student group. There was approximately a 20% failure rate amongst these Dip.Acc. students in Accounting II, with 15 failures (20%) amongst the matric Accounting group and 8 (i.e. 19%) amongst those without matric Accounting. At Accounting III level, 12 students with matric Accounting repeated the course (i.e. 16%) whereas 3 students without matric Accounting (i.e. 7%) did likewise. No information has been collected on the drop-out rates of the entire student groups in Accounting II and III.

A count was also done of those Dip.Acc. students who had not repeated Accounting at any stage in their progress towards a B.Com. Amongst the 75 students with matric Accounting, 50 had not repeated any of the Accounting courses (i.e. 67%). Amongst the 42 students without matric Accounting, 27 had not repeated any of the Accounting courses (i.e. 64%).

## 11.5 COMMENT

There appears to be some evidence that the matric Accounting student is more likely to proceed through to a Dip.Acc. than the non-Accounting matriculant, in view of the fact there has been a significant change in the composition of the Dip.Acc. student group in relation to the Accounting I student group of 1988.

It must be noted that a comparison of failure rates by the Dip.Acc. group at Accounting I, II and III levels does not provide sufficient information for definite conclusions to be made, as this group naturally excludes those students who have dropped out at earlier stages.

It should also be noted that those students who had repeated at some stage all matriculated before 1987 and therefore would not have been exposed to the present high school Accounting syllabus. Any conclusions drawn from information on these students who have repeated will therefore lack relevance to present conditions.

## CHAPTER 12

# CONCLUSION AND RECOMMENDATIONS

This study has centred on the issue of the relevance of the secondary school Accounting course towards further study at university level. The main criticisms of school Accounting offered by university lecturers across the country are that students are not prepared to think independently, that they are inflexible and that they can follow mechanical procedures without understanding the underlying reasoning.

It is apparent that there are only two groups of individuals who are, at present, aware of the specific characteristics of the methodology of the teaching of Accounting in Natal schools under the auspices of the NED in their adoption of what has become known as the "thinking" approach. These are the NED Subject Committee for Accounting and the school teachers of Accounting in Natal schools. The underlying purpose of this "thinking" approach is to produce a pupil who can:

- \* think independently
- \* offer opinions
- \* be flexible
- \* understand and explain the underlying reasoning for various Accounting procedures
- \* apply his/her knowledge to a wide variety of situations whichever career might be followed in his/her future.

It is evident that the results obtained by this study of the Natal situation cannot necessarily be held to apply to the other provinces. Although the same core syllabus is applied by the various provincial education departments, it is the emphasis on different aspects of the syllabus which varies markedly. This is evidenced through the differences in the matric Accounting papers which have been identified by the Natal teachers and Subject Committee.

It is hoped, through communication between school Accounting subject committees in the various provinces with input from the university authorities, that the Natal situation can be assessed with a view to providing guidelines to teachers on a nationwide basis. Whilst it must always be remembered that school Accounting must cater also for the pupil who does not wish to follow a career in Accounting, it appears as if the demands of the universities for a "thinking" student coincide with the attributes required of a pupil in any niche he/she might occupy in society.

It is the duty of every Accounting teacher to update himself/herself within the subject and to adapt to the changing nature of generally accepted accounting practice and the changing needs of the accounting environment. This aspect is increasing in importance as is evidenced by the Walters Report with its recommendations on vocational education at school level. The major problem, however, is of Accounting teachers teaching a dynamic changing subject in an educational environment which some perceive to be stagnant and offering little immediate incentive or reward

for excellence. As a result of past criticisms, possibly justified, levelled against the teaching of Accounting in the schools, certain teachers could conceivably have built up a resistance to listening to further comment from the universities and some have openly stated that school Accounting should not "cater to the universities". An encouraging feature, however, is that this attitude is representative of a very small minority of teachers. The "thinking" approach as outlined earlier, now has the support of an overwhelming majority of matric teachers of Accounting in Natal.

From the universities' point of view, there is also a need to become better acquainted with developments in school Accounting, so that any further criticisms can be considered as constructive rather than destructive. Although the universities do have indirect input in the development of the school syllabi and do have representation on the subject committees, it is in the implementation of the syllabi that more meaningful communication is urgently required.

This study has outlined the negative comments that are often made about school Accounting by some university authorities and some members of the Accounting profession. Examples of such comments are:

- \* "The subject can always be studied when one leaves school"
- \* "Accounting does not extend the bright pupil and has little educational merit at school level as the

subject does not require the pupil to exercise the higher levels of his/her intellect"

- \* "One should not train pupils vocationally at school level"
- \* "The universities prefer their students not to have studied Accounting at school".

From the survey of the university lecturers and members of the Accounting profession, it is apparent that if such comments are made, they are certainly not representative of the majority viewpoint.

The Accounting profession, especially as represented by the leading firms in the Durban area, appears to be almost totally convinced of the value of school Accounting toward further progress in the pursuit of the C.A. qualification and moreover, they recognise the value of school Accounting as a recruiting tool in exposing pupils to the Accounting profession.

This is further evidenced in the change in the mix of the Accounting I student group over the years 1988 to 1990. Whereas in 1988, 50% of the students comprised those with matric Accounting, this figure progressed to 75% in 1990. The improved quality of the school Accounting pupil has been a factor which has been ascribed to the new subject packages (including the Double Science-Accounting course) which applied to matriculants in Natal from 1988 onwards, and to the greater challenge offered by school Accounting under the new syllabus and new teaching approaches. This appears to have had the effect of boosting the total matric

points achieved by the typical matric Accounting pupil, which is mirrored in the B.Com. acceptances at university.

The fact that several universities in South Africa offer supplementary or bridging courses for students without matric Accounting is evidence that they recognise the early advantage enjoyed by students with matric Accounting. The majority also appear to recognise that the student with matric Accounting is more likely to pass the Accounting I course at the first attempt. This has become increasingly more probable as a result of the changes in the school Accounting syllabus, which now covers a sizable portion of the Accounting I coursework (and part of the Accounting II coursework at some universities). The work covered in four or five years at school level may be covered in less than one academic year at university level, a pace which appears to be too fast for the typical non-Accounting matriculant to handle.

One of the more informative findings of this study is the attitudes of the students themselves. There is no doubt that the vast majority of those students without matric Accounting believe that they are at a great disadvantage in the Accounting I year. Of those students who did not undertake Accounting as a matric subject, over 70% felt, in retrospect, that they should have undertaken Accounting as a matric subject. Of those students whose schools did not offer Accounting, over 81% believed, in retrospect, that they should have undertaken the subject. This finding should be of great interest to most of the private schools who, apart from the technical and agricultural schools, are

the only high schools in Natal which do not offer Accounting in their subject packages.

In analysing student performance in Accounting I over three years 1988 to 1990, the comparison of students with matric Accounting (MA students) to those with no matric Accounting (NMA students), several important findings were noted (Results of students who matriculated through the NED only are noted here. For a complete analysis, refer to Chapter 10).

\* **Drop-out statistics**

Throughout this study, the performance of drop-outs has been regarded as a central issue in assessing the relevance of the high school Accounting course towards further study in Accounting at university.

Students without previous exposure to the subject at high school level were found to have significantly higher drop-out rates than students with previous exposure. Drop-outs amongst the NMA student group were, moreover, found to be of significantly higher academic ability than drop-outs amongst the MA student group.

The drop-out rate for MA students ranged from 4% to 9% over the three years, whereas that of NMA students ranged from 18% to 51%. When the drop-out rate is analysed further by taking into account the differing levels of academic ability as reflected by matric

points, it was found that drop-out rates of MA students were significantly lower than those of NMA students. Over the three years, there were no drop-outs of MA students who had achieved 42 points or more, while the drop-out rates of NMA students in the same academic category ranged from 9% to 25%.

The statistical tests revealed that drop-outs of the MA group of students were of significantly lower academic ability in comparison to NMA drop-outs. This is evidenced through the mean matric points score of MA drop-outs compared to that of NMA drop-outs.

It was found that a student of relatively low academic ability (31 points) who has undertaken Accounting up to matric level is likely to survive the Accounting I course to the end of the year, whereas the student without matric Accounting will need to possess relatively high academic ability (35 points) to have a reasonable assurance of being in a position to write the year-end examination.

Further tests revealed that amongst the MA group of students, the academic quality of drop-outs was significantly lower than that of students who wrote the year-end examination. This was, however, not the case for students without previous exposure, where drop-outs appeared to possess academic ability commensurate with that of students who remained in the course up to the year-end.

For students without previous exposure to the subject up to matric level, it appears that academic ability alone is not a major assurance of ability to prevent drop-out from the Accounting I course.

\* **The pass rate**

It was found that pass rates of MA students were significantly higher than those of NMA students.

The pass rate for MA students ranged from 82% to 83% over the three years, whereas that of NMA students ranged from 17% to 43%. The same trend is evident when the pass rate is analysed further by taking into account the differing levels of academic ability as reflected by matric points. Over the three years, the pass rates of MA students who had achieved 42 points or more ranged from 96% to 100%, while the pass rates of NMA students in the same academic category ranged from 62% to 81%.

\* **Marks achieved in Accounting I**

Despite the fact that drop-outs were excluded from the unpaired T-tests on Accounting I marks and the fact that there was no significant difference in the overall academic ability of MA and NMA students, it was established that significantly better Accounting I results were achieved by students with previous exposure to the subject up to matric level. In each of the three years of the study, the differential in mean Accounting I marks was at least 10%, a difference

which would have been accentuated had drop-outs formed part of this analysis.

With the awarding of a mark of 0% to drop-outs, the average marks achieved by MA students ranged from 56% to 57% over the three years, whereas that of NMA students ranged from 25% to 41%. Bear in mind that a pass is 50% and that a student is required to achieve 55% before proceeding to Accounting II. When average marks are analysed further by taking into account the differing levels of academic ability as reflected by matric points, it was found that average marks of MA students were significantly higher than those of NMA students. Over the three years, the average marks of MA students who had achieved 42 points or more ranged from 70% to 71%, while the average marks of NMA students in the same academic category ranged from 45% to 57%.

It is therefore apparent that the student with matric Accounting is more likely to achieve success in his first-year Accounting studies at university level than the student without previous exposure to the subject. The fact that the non-Accounting matriculant is more likely to drop out of or fail the Accounting I course at the University of Natal (Durban) carries with it the implication that these students are more likely therefore to alter their career objectives as a result of their lack of early success. It has been a deficiency in previous studies that only the survivors of the Accounting I course were considered in the making of judgements on the relevance of the school Accounting course. It has been concluded in this study that the high school Accounting course must be seen to be

relevant to further study at university level if it places its products in a better position to be able to survive the university Accounting I course, thereby enabling students to pursue further their first-choice career option.

Whilst this conclusion of the early advantage enjoyed by Accounting matriculants in the first year university Accounting course comes as no surprise to many educators, the extent of the advantage as perceived by students and as reflected by Accounting I results at the University of Natal (Durban) is most significant. The fact that certain students have admitted to being influenced against undertaking Accounting as a matric subject by guidance counsellors or members of the profession, has severe implications for their later progress at university level.

It is hoped that this study has corrected the misconceptions surrounding school Accounting in Natal and that the results will be borne in mind by all parties concerned:

- \* By **university lecturers** in their construction of the Accounting I course, in expressing their opinions on school Accounting, and in an increased involvement in assisting school teachers in their teaching methodologies.
- \* By **school guidance officers** and **school principals** in the courses offered and recommended at their schools. Whilst subject choices should be made on the basis of a pupil's aptitude and interests, the choice of eventual career is a factor which cannot be ignored

with regard to whether or not the pupil opts for the school Accounting course.

- \* By **school pupils** at the end of their Standard 7 year, in their choice of subject package.
- \* By **school teachers** and **subject committees** in their adaptation to the needs of a changing environment and their willingness to heed constructive criticism from the universities and the profession.
- \* By **matric Accounting examiners** in the setting of their papers which has a significant effect on teaching methods and areas of emphasis.
- \* By prospective **university students** in understanding the potential problems which will be experienced in their study of Accounting.
- \* By **accountants** in public practice whose opinions on the relevance or otherwise of school Accounting could conceivably influence school pupils or university students into ill-informed judgements on the choice of school subjects and careers.

With the discipline of Accounting constantly in a state of flux and with school Accounting attempting to keep pace, it is not envisaged that the results of this study will apply indefinitely. Further on-going research into the relevance of school Accounting towards further study at university level is a vital necessity if the needs of university students and school pupils are to be met.

## **APPENDIX A**

### **QUESTIONNAIRES COMPRISING THIS STUDY**

QUESTIONNAIRE TO STD 10 PUPILS IN NATAL

NAME: \_\_\_\_\_

MALE OR FEMALE: \_\_\_\_\_

SCHOOL: \_\_\_\_\_

Please answer the following questions by placing a tick (✓) in the appropriate block.

QUESTION 1

Do you plan to further your studies at university after matriculating?

YES	
NO	
UNDECIDED	

QUESTION 2

Do you plan to enrol for a B.Com. or B.Acc. degree at university?

YES	
NO	
UNDECIDED	

QUESTION 3

Do you intend to follow a career in Accounting?

YES	
NO	
UNDECIDED	

QUESTION 4

Have you chosen Accounting as one of your matric subjects?

YES	
NO	

QUESTION 5

When you made your choice of subject package at the end of Std 7, did you consider that you might follow a future career in Accounting?

YES	
NO	

QUESTIONNAIRE TO ACCOUNTING I STUDENTS

For YES/NO/UNSURE responses, please check the appropriate blocks.

1. Your name? \_\_\_\_\_
2. In which year did you matriculate? \_\_\_\_\_
3. In which province did you matriculate? \_\_\_\_\_
4. What school did you attend in Std 10? \_\_\_\_\_
5. What degree are you presently undertaking? \_\_\_\_\_
6. What profession do you intend following? \_\_\_\_\_
7. Do you intend to undertake Accounting II? YES  NO  UNSURE
8. Did your school offer Accounting as a matric subject? YES  NO
9. Did you undertake Accounting as a matric subject? YES  NO
10. Were you discouraged by school authorities from choosing Accounting as part of your subject package at school? YES  NO
11. On reflection, do you feel Accounting should have been part of your subject package at school? YES  NO  UNSURE
12. In your opinion, does school Accounting provide a good grounding for the topics studied in Accounting I? YES  NO  UNSURE
13. In your opinion, does school Accounting assist a student in understanding concepts in Accounting I? YES  NO  UNSURE
14. In your opinion, does school Accounting enable a student to save time in Accounting I? YES  NO  UNSURE
15. In your opinion, is school Accounting a disadvantage to the Accounting I student? YES  NO  UNSURE
16. In your opinion, does the Accounting I course proceed too quickly? YES  NO  UNSURE
17. Did you encounter difficulties in your Accounting I studies? If YES, describe briefly \_\_\_\_\_  
\_\_\_\_\_

PLEASE TURN OVER ----->

THESE QUESTIONS TO BE ANSWERED BY THOSE STUDENTS WHO HAD UNDERTAKEN ACCOUNTING AS A MATRIC SUBJECT

18. What was your symbol for Accounting in the matric exam? \_\_\_ Grade: Higher/Standard
19. In your opinion, did your study of Accounting at school motivate you to pursue your study in this field at University? YES  NO  UNSURE
20. Were you encouraged to adopt a 'thinking' approach to the subject at school, as opposed to a 'bookkeeping' approach? YES  NO  UNSURE
21. Did your Accounting teacher at school stimulate your interest in pursuing the subject at University? YES  NO  UNSURE
22. Are you frequently asked for assistance in Accounting by those students who:  
 (a) had not studied Accounting in matric? YES  NO  UNSURE   
 (b) had studied Accounting in matric? YES  NO  UNSURE
23. In your opinion, is the school Accounting syllabus largely relevant to your study of Accounting at University? YES  NO  UNSURE
24. Do certain Accounting I topics repeat work covered at school without much further development to your knowledge in those topics? If YES, state which topics \_\_\_\_\_  
 \_\_\_\_\_
25. Does this repetition tend to make you complacent in your study of certain topics? YES  NO  UNSURE

QUESTIONNAIRE TO MEMBERS OF THE NED SUBJECT COMMITTEE FOR ACCOUNTING

Please respond by placing a tick in the appropriate block .

1. In your opinion, has the "thinking" approach as outlined at Natal seminars for Accounting teachers, been a step in the right direction?

YES  NO  UNSURE

2. Have you noticed a difference in style of the Natal matric Accounting papers as opposed to those of other provinces?

YES  NO  UNSURE

If "YES" please explain.....  
.....

3. Do you feel that the NED matric Accounting papers have had a positive effect on the teaching methods of the majority of teachers in Natal?

YES  NO  UNSURE

4. Do you feel that there are still certain teachers who seem unable to come to terms with the "thinking" approach?

YES  NO  UNSURE

If "YES", what do you feel are the reasons?.....  
.....

5. Do you feel that the syllabus still contains topics which hinder the Accounting teacher in instilling the correct approach in his/her pupils (e.g. too much bookkeeping)?

YES  NO  UNSURE

6. The universities have criticised school Accounting pupils for their lack of flexibility at university level. Do you agree?

YES  NO  UNSURE

If "YES", what explanation can you offer?.....  
.....

7. Do you feel that Accounting teachers are still too textbook-bound?

YES  NO  UNSURE

PLEASE TURN OVER ----->

8. Do you feel that the checklist of theory topics issued to school teachers is too restrictive?

YES  NO  UNSURE

10. Do you welcome the introduction of the theory component in the new syllabi (1991-1994)?

YES  NO  UNSURE

11. Do you feel that the quality of the Accounting pupil in Natal has improved?

YES  NO  UNSURE

If "YES", what are the reasons?.....  
.....

QUESTIONNAIRE TO ACCOUNTING TEACHERS AT HIGH SCHOOL LEVEL

Please answer the following questions by placing a tick  in the appropriate blocks.

Name (optional) \_\_\_\_\_ School (optional) \_\_\_\_\_

1. In which year did you start teaching Accounting at high school level? \_\_\_\_\_
  
2. Have you taught at least one year at Std 10 Higher Grade level:
 

under the present syllabus?	YES		NO	
under the previous syllabus (up to 1986)?	YES		NO	
  
3. In your opinion, is the present syllabus more relevant than the previous syllabus to those pupils at your school who continue their studies in Accounting at university level?
 

YES  NO  UNSURE
  
4. In your opinion, is the present syllabus more relevant than the previous syllabus to those pupils at your school who do not continue their studies in Accounting at university level?
 

YES  NO  UNSURE
  
5. In your opinion, is the present syllabus more interesting to your pupils than the previous syllabus?
 

YES  NO  UNSURE
  
6. In your opinion, is the present syllabus more interesting to teach than the previous syllabus?
 

YES  NO  UNSURE
  
7. Has the introduction of the present syllabus led to a change in your teaching methods?
 

YES  NO  UNSURE

If YES, please describe this change briefly \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_
  
8. Do you feel that the seminars presented for Accounting teachers in Natal have been adequate in:
  - (a) stimulating new ideas in your teaching methods?
 

YES  NO  UNSURE

(b) keeping you up to date with new trends?

YES  NO  UNSURE

9. Do you feel the primary responsibility for developing new ideas, doing research and keeping up to date lies with the individual teacher rather than a syllabus committee?

YES  NO  UNSURE

Comment (if necessary) \_\_\_\_\_

---



---

10. In your opinion, the emphasis on "bookkeeping" (i.e. pure recording of transactions) on the Higher Grade in the present syllabus is:

too much  too little  just right

12. In your opinion, the emphasis on "accounting" aspects (e.g. analysis and interpretation of financial statements) on the Higher Grade in the present syllabus is:

too much  too little  just right

13. In your opinion, the emphasis on underlying theoretical aspects (e.g. internal control, usefulness of financial statements) on the Higher Grade in the present syllabus is:

too much  too little  just right

14. In your opinion, the emphasis on testing insight on the Higher Grade in the Natal Senior Certificate Accounting papers for 1987 and 1988 is:

too much  too little  just right

15. Teaching methods have to be adapted to the particular group being taught. Do you feel that the Higher Grade Accounting pupils at your school relate better to an "accounting" approach rather than a "bookkeeping" approach?

ACCOUNTING APPROACH  BOOKKEEPING APPROACH   
NO SIGNIFICANT DIFFERENCE IN THE PERFORMANCE OF OUR PUPILS

16. The more recent seminars for Accounting teachers in Natal have stressed that an "accounting" approach should be adopted under the present syllabus. In your opinion, does the subject still encourage mere regurgitation of facts and procedures rather than developing independent thinking by the pupil?

YES  NO  UNSURE

17. In your opinion, does Accounting, as taught by you, provide as much a challenge and an opportunity to develop independent thinking by your pupils as does:

First language?	<input type="checkbox"/>	Mathematics?	<input type="checkbox"/>	History?	<input type="checkbox"/>
Geography?	<input type="checkbox"/>	Economics?	<input type="checkbox"/>	Science?	<input type="checkbox"/>
Biology?	<input type="checkbox"/>				

18. One of the general aims stipulated in the present Accounting Higher Grade syllabus is:  
 "to develop the pupils' understanding of and their adaptation to their social environment by the meaningful interpretation of accounting information which they will come across in their future lives"

In your opinion:

- (a) does the present syllabus succeed in this respect?

YES  NO  UNSURE

- (b) does this depend on the methodology of the teacher?

YES  NO  UNSURE

19. A specific aim of the present Higher Grade syllabus is  
 "to cultivate in pupils an understanding and appreciation of the value and importance of accounting for private purposes, as a preparation for a career and as an incentive to continue their studies"

In your opinion:

- (a) does the present syllabus succeed in this respect?

YES  NO  UNSURE

- (b) does this depend on the methodology of the teacher?

YES  NO  UNSURE

20. A specific aim of the present Higher Grade syllabus is  
 "applications must be reconcilable with sound internal control and business managerial principles"

In your opinion:

- (a) does the present syllabus succeed in this respect?

YES  NO  UNSURE

- (b) has your tertiary education been adequate in this respect?

YES  NO  UNSURE

(c) have the seminars been sufficient in this respect?

YES  NO  UNSURE

(d) has it been necessary for you to do additional research on this aspect?

YES  NO  UNSURE

21. When the present Std 9 and 10 Higher Grade syllabus is revised, which topics do you feel should be excluded? \_\_\_\_\_

22. When the present Std 9 and 10 Higher Grade syllabus is revised, which topics do you feel should be included? \_\_\_\_\_

23. Do you get feedback from ex-pupils who have done Accounting at matric level and then gone on to further their studies in Accounting at tertiary level?

YES  NO

If YES, do these pupils feel that their school accounting has assisted them at tertiary level?

ALL  MOST  SOME  NONE

24. Please rank the major problems encountered by Accounting teachers, by placing numbers in the appropriate blocks. Feel free to add to the list. The major problem to be designated [1], second largest problem to be designated [2] and so on. If you feel that any item below does NOT constitute a problem, please DELETE the item with a straight line.

- |   |     |
|---|-----|
| (a) Negative attitude of pupils                                 | [ ] |
| (b) Negative attitude of guidance counsellors                   | [ ] |
| (c) Negative attitude of school principals                      | [ ] |
| (d) Negative attitude of parents                                | [ ] |
| (e) Subject is boring to teach                                  | [ ] |
| (f) Subject is boring for the pupils                            | [ ] |
| (g) Pupils not prepared to think for themselves                 | [ ] |
| (h) Subject does not encourage pupils to think for themselves   | [ ] |
| (i) There is no time to do research in order to keep up to date | [ ] |
| (j) Teaching different grades in the same class                 | [ ] |
| (k)   | [ ] |
| (l)   | [ ] |
| (m)   | [ ] |

QUESTIONNAIRE TO UNIVERSITY LECTURERS OF ACCOUNTING I

NAME: \_\_\_\_\_ UNIVERSITY: \_\_\_\_\_

Please respond to the following statements or questions by placing a tick  in the appropriate blocks.

1. Are you conversant with the contents of the current School Accounting syllabus (introduced in Std 10 in 1987)?

YES  NO

2. The Accounting I student who HAS studied Accounting at school is likely to obtain better marks at the end of the Accounting I year, than a student of the same academic ability, who HAS NOT studied Accounting at school.

AGREE STRONGLY  AGREE  UNSURE   
DISAGREE  DISAGREE STRONGLY

3. The Accounting I student who HAS studied Accounting at school is likely to obtain better marks half way through the Accounting I year than a student of the same academic ability, who HAS NOT studied Accounting at school.

AGREE STRONGLY  AGREE  UNSURE   
DISAGREE  DISAGREE STRONGLY

4. The Accounting I student who HAS studied Accounting at school has a better chance of passing Accounting I at the first attempt than a student who HAS NOT studied Accounting at school.

AGREE STRONGLY  AGREE  UNSURE   
DISAGREE  DISAGREE STRONGLY

5. The Accounting I student who HAS studied Accounting at school is more likely to proceed through to a Dip.Acc. than a student who HAS NOT studied Accounting at school.

AGREE STRONGLY  AGREE  UNSURE   
DISAGREE  DISAGREE STRONGLY

6. The school Accounting syllabus is of relevance to the prospective Accounting I student.

AGREE STRONGLY  AGREE  UNSURE   
DISAGREE  DISAGREE STRONGLY

7. The school Accounting syllabus is too orientated towards "bookkeeping" rather than "accounting".

AGREE STRONGLY  AGREE  UNSURE   
DISAGREE  DISAGREE STRONGLY

8. Are you aware that there has been a significant change in Natal in emphasis on the objectives of teaching Accounting at high school level and on emphasis on aspects of the syllabus (i.e. adoption of a "thinking" approach and greater emphasis on analysis and interpretation of financial statements as well as underlying theory)?

YES  NO

9. Are you aware of any students who have studied Accounting at school level under the auspices of the NED since 1987?

YES  NO

If your answer to the above question is YES, what is your opinion of the level of achievement of these students in Accounting I?

EXCEPTIONAL  VERY GOOD  ABOVE AVERAGE   
AVERAGE  BELOW AVERAGE  POOR  UNSURE

10. From your experience, would you say that the level and quality of training of school Accounting teachers has created problems for you?

YES  NO  UNSURE

11. Accounting I students who have done Accounting at school level tend to become complacent during their Accounting I year.

AGREE STRONGLY  AGREE  UNSURE   
DISAGREE  DISAGREE STRONGLY

12. Accounting I students who have done Accounting at school level tend to be less adaptable to new or different approaches in their Accounting I year.

AGREE STRONGLY  AGREE  UNSURE   
DISAGREE  DISAGREE STRONGLY

13. The Accounting I lecturers are faced with a major problem due to the fact that some students have studied Accounting at school level whereas others have not.

AGREE STRONGLY  AGREE  UNSURE   
DISAGREE  DISAGREE STRONGLY

14. A solution to the problem mentioned in Question 13 (bove) would be to introduce a supplementary course at University for those students who had not undertaken Accounting at school level.

AGREE STRONGLY  AGREE  UNSURE   
DISAGREE  DISAGREE STRONGLY

Please comment briefly if any distinction is made at your University between those students who have/have not studied Accounting at school level and the manner in which the different groups are catered for:

.....

QUESTIONNAIRE TO ACCOUNTANTS IN PUBLIC PRACTICE

NAME OF PERSON COMPLETING THIS QUESTIONNAIRE: \_\_\_\_\_  
 FIRM: \_\_\_\_\_ BRANCH: \_\_\_\_\_

Please respond to the following statements or questions. Where blocks are provided, please place a tick  in the appropriate block.

1. Details of your branch as at 31 December 1990:

Number of partners: \_\_\_\_\_  
 Number of trainee accountants (total): \_\_\_\_\_  
 Number of graduate first-year trainee accountants: \_\_\_\_\_  
 Number of non-graduate first-year trainee accountants: \_\_\_\_\_  
 Average number of students employed during their July or December vacations \_\_\_\_\_

2. Are you conversant with the contents of the current School Accounting syllabus (introduced in Std 10 in 1987)?

YES  NO

3. Have you seen the 1987 to 1990 Natal Education Department Accounting (Higher Grade) examination papers?

YES  NO

4. School Accounting is of benefit to the student who wishes to follow career in Accounting.

AGREE STRONGLY  AGREE  UNSURE   
 DISAGREE  DISAGREE STRONGLY

5. School Accounting is of benefit to the Accounting profession in exposing prospective recruits to the profession in that pupils develop an awareness of Accounting as a suitable or prospective profession.

AGREE STRONGLY  AGREE  UNSURE   
 DISAGREE  DISAGREE STRONGLY

6. The non-graduate first-year trainee accountant who has studied Accounting at school level, is more proficient in the tasks allocated to him/her than the trainee accountant who has not studied Accounting at school level.

AGREE STRONGLY  AGREE  UNSURE   
 DISAGREE  DISAGREE STRONGLY

7. Non-graduate first-year trainee accountants who have done Accounting at school level tend to be less adaptable to new or different approaches.

AGREE STRONGLY  AGREE  UNSURE   
 DISAGREE  DISAGREE STRONGLY

PLEASE TURN OVER ----->

8. School accounting is of benefit to the prospective entrepreneur who does NOT follow a career in Accounting.

AGREE STRONGLY  AGREE  UNSURE   
 DISAGREE  DISAGREE STRONGLY

9. Are you aware that there has been a significant change in Natal in emphasis on the objectives of teaching Accounting at high school level and on emphasis on aspects of the syllabus (i.e. adoption of a "thinking" approach and greater emphasis on analysis and interpretation of financial statements as well as underlying theory)?

YES  NO

10. The school Accounting syllabus is still too orientated towards "bookkeeping" rather than "accounting".

AGREE STRONGLY  AGREE  UNSURE   
 DISAGREE  DISAGREE STRONGLY

11. The Accounting I student who HAS studied Accounting at school is more likely to proceed through to a Dip.Acc. or C.T.A. than a student who HAS NOT studied Accounting at school.

AGREE STRONGLY  AGREE  UNSURE   
 DISAGREE  DISAGREE STRONGLY

MANY THANKS FOR YOUR TIME AND CO-OPERATION IN THE COMPLETION  
 OF THIS QUESTIONNAIRE.

QUESTIONNAIRE TO DIP ACC STUDENTS

Your assistance in completing this questionnaire is greatly appreciated in order to assist the University with its ongoing research. Where blocks are provided, please place a tick  in the appropriate block.

1. Name of student.....
2. In which year did you matriculate?.....
3. At which school did you matriculate?.....
4. Did you undertake Accounting as a matric subject?  
 YES  NO
5. If your answer to (4) above is yes, what symbol did you achieve in Accounting in matric?  
 SYMBOL .....
- HIGHER GRADE  STANDARD GRADE
6. Did you repeat ACCOUNTING I at university level?  
 YES  NO
7. Did you repeat ACCOUNTING II at university level?  
 YES  NO
8. Did you repeat ACCOUNTING III at university level?  
 YES  NO

MANY THANKS FOR YOUR TIME AND CO-OPERATION IN THE COMPLETION OF THIS QUESTIONNAIRE.

## **APPENDIX B**

### **TABLES OF DATA ACCUMULATED**

Table 3.1

## COMPARISON OF TOPICS IN ACCOUNTING I AND SCHOOL SYLLABI

\* in the relevant columns indicates whether or not the particular topic is covered at high school level, and, if so, the depth at which it is covered. The standards at which the topics are covered are also indicated.

(\*) indicates that the topic is covered in Natal schools but does not appear to be covered in the other provinces. This opinion is based on the content of matric accounting papers. Note that even though certain topics might be indicated as not being covered at school level, it is known that several teachers do incorporate these topics in their lessons (e.g. Accounting standards and intangible assets).

TOPIC	COVERED AT SCHOOL		AT WHICH LEVEL	DEPTH	
	YES	NO		DETAIL-ED	INTRO-DUCTORY
<b>MODULE 1</b>					
<b>INTRODUCTION AND NATURE OF ACCOUNTING</b>					
Description of Acc and its applications	*		6-7	*	
Purpose and nature of Acc info. and systems	*		6-10	*	
Dif. between Financial Acc and Management Acc	(*)		8		(*)
Acc and the environment		*			
Users of Acc info. and identification of main decision interest	(*)		6-10		(*)
Entity Concept	(*)				(*)
Dif. types of entities	*		6-10	*	
Qualitative characteristics of Financial Statements		*			
Role of Acc Standards		*			
<b>MODULE 2</b>					
<b>THE ACCOUNTING CYCLE</b>					
FS format of sole proprietor	*		7-9	*	
Capital structures of					
sole proprietors	*		6-9	*	
partnerships	*		9-10	*	
close corporations		*			
companies	*		10	*	
non-profit organisations	*		10	*	
Net Income appropriation					
Taxation	*		10	*	
Dividends	*		10	*	
Retained Income	*		9-10	*	
Definition of elements of FS	(*)		6-10		*
A, L, E, R, E					
Accounting Equation	*		6-10	*	

Table 3.1 continued

TOPIC	COVERED AT SCHOOL		AT WHICH LEVEL	DEPTH	
	YES	NO		DETAIL- ED	INTRO- DUCTORY
Recognition of elements of FS	*				*
Acc concepts / principles	(*)		8-10		*
Measuring of income	*		6-10	*	
Dif between operating income and extraordinary items		*			
Transactions with owners	*		6-10	*	
The Acc period and final adjustments	*		8-10	*	
Assets consumed to earn revenue (COS, depr etc)	*		7-10	*	
Dif between cash flows & income flows & accruals	*		8-10	*	
Other types of adjustments prepayments etc	*		9-10	*	
Relating Acc concepts to recording of rev & exp	(*)		8-10		*
Worksheet for adjustments	(*)		9-10		*
Final adjusted TB	*		8-10	*	
The Ledger & groups of a/cs	*		6-10	*	
Rules of debit & credit	*		6-10	*	
Purpose of a journal	*		6-10	*	
Entries to record transactns	*		6-10	*	
Reversing entries	*		8-10	*	
Posting to ledger	*		6-10	*	
Balancing accounts	*		6-10	*	
TB and its limitations	*		8	*	
Closing entries and post-closing TB	*		8-10	*	
Acc cycle & Acc procedures manual system computer-based system	*	*	6-10	*	

<b>MODULE 3</b> <b>DATA GATHERING, RECORDING,</b> <b>RECONCILIATION AND CONTROL</b>
---

Source documents	*		6-10	*	
Special journals	*		6-10	*	
Cash Book	*		6-10	*	
Control Accounts	*		7-10	*	
Reconciliation	*		8-10	*	
Petty Cash	*		8	*	
Internal Controls	(*)		7-10	(*)	

Table 3.1 continued

TOPIC	COVERED AT SCHOOL		AT WHICH LEVEL	DEPTH	
	YES	NO		DETAIL- ED	INTRO- DUCTORY

<b>MODULE 4</b> <b>ALLOCATION OF COSTS TO</b> <b>INCOME STATEMENT &amp; BALANCE</b> <b>SHEET; LONG-TERM FINANCE</b>
--

Categories of Assets	*		6-10	*	
Asset Disposal	*		9-10	*	
Intangible Assets		*			
Periodic vs Perpetual inventory systems	*		9		*
Relation between inventory & meas. of income		*			
Phys. inventory & in transit		*			
Inventory pricing & valuation methods		*			
Comparison & evaluation of methods		*			
Estimate closing inventory		*			
Acc for stocks (lower of cost and NRV)		*			
Doubtful Debts	*		9-10	*	
Bad Debts & Recovered	*		8-10	*	
Acc for Bills		*			
Concept of present value		*			
Sources of finance	*		6-10	*	
Nature of capital structure & gearing	*		9-10	*	

<b>MODULE 5</b> <b>MANUFACTURING OPERATIONS;</b> <b>BUDGETING - MANAGEMENT</b> <b>PLANNING AND CONTROL</b>
---

Merchandising vs Manuf.	*		10	*	
Manufacturing costs	*		10	*	
Absorption & Variable Costing		*			
Computing cost of FG and WIP		*			
Ledger accounts (manuf.)	*		10		*
Closing entries (manuf.)	*		10		*
Budgeting, nature & benefit		*			
Master Budget		*			
Incremental & Zero-based		*			
Flexible Budget		*			
Computerised budgeting		*			

Table 3.1 continued

TOPIC	COVERED AT SCHOOL		AT WHICH LEVEL	DEPTH	
	YES	NO		DETAIL- ED	INTRO- DUCTORY
<b>MODULE 6</b>					
<b>ACCOUNTING FOR EFFECTS OF INFLATION</b>					
Inflation Acc		*			
Inventory profits		*			
Hicksian Concept		*			
General vs Specific changes		*			
NI in constant rands		*			
Restating COS & depr.		*			
Holding gains & losses		*			
NI on current cost basis		*			
Disclosure of effects of inflation		*			
Present Acc practice in SA		*			
Criteria: choice of method		*			
Objectives of FS	*		7-10		*
Need for additional info	(*)		10		(*)
Cash Flow Stmt	*		10	*	
Cash & cash equivalents	*		10	*	
Format of CFS	*		10	*	
Adjustments to NI	*		10		*
Alternative computation		*			

<b>MODULE 7</b>
<b>CASH FLOW STATEMENTS;</b>
<b>ANALYSIS &amp; INTERPRETATION</b>
<b>OF FINANCIAL STATEMENTS</b>

Objectives of FS and users	(*)		7-10		(*)
Need for more info	(*)		10		(*)
Usefulness of Interpretation	(*)		10		(*)
Source of info	(*)		10		(*)
Limitations of FS	(*)		10		(*)
Analytical techniques	*		7-10	*	
Limitations of ratios	(*)		8-10	(*)	
Sample ratios & computations	*		7-10	(*)	*
Interpretation of ratios	*		7-10	(*)	*
Demonstration problem	*		9-10		(*)
Components of calculations & changes therein	(*)		7-10	(*)	

Table 4.1

## RESPONSES OF NED MATRIC PUPILS

	1988		1987	
	TOTAL	%	TOTAL	%
Total number of matric pupils writing the Natal Snr Certificate	9075		8842	
Number of responses	4918		4158	
Pupils planning to attend university	1812	37%	1519	37%
Pupils planning not to attend university	2705	55%	2239	54%
Pupils unsure about attending university	401	8%	400	9%
Pupils planning to attend university	1812		1519	
Pupils planning to do a B.Com. or B.Acc.	524	29%	435	29%
Pupils planning to attend university but not to do a B.Com. or B.Acc	1153	64%	973	64%
Pupils unsure about undertaking a B.Com. or B.Acc.	135	7%	111	7%
Number of responses	4918		4158	
Pupils planning to follow a career in Accounting	480	10%	396	10%
Pupils planning not to follow a career in Accounting	4014	82%	3426	82%
Pupils unsure about following a career in Accounting	424	8%	336	8%
Number of responses	4918		4158	
Pupils with matric Accounting	1737	35%	1376	33%
Pupils without matric Accounting	3181	65%	2782	67%
Pupils who considered Accounting as a career option when making subject package choice at the end of Std 7	1254	25%	1031	25%
Pupils with matric Accounting	1737		1376	
Pupils with matric Accounting who plan to do a B.Com. or B.Acc.	324	19%	265	19%
Pupils with matric Accounting who plan to follow a career in Accounting	400	23%	327	24%
Pupils without matric Accounting	3181		2782	
Pupils without matric Accounting who plan to do a B.Com. or B.Acc.	200	6%	169	6%
Pupils without matric Accounting who plan to follow a career in Accounting	80	3%	68	2%

Table 5.1

## RESPONSES FROM ACCOUNTING I STUDENTS

	1988		1989	
	TOTAL	%	TOTAL	%
Total number of responses	435		448	
Students intending to undertake ACC II	232	53%	235	52%
Students not intending to undertake ACC II	133	31%	155	35%
Students unsure about undertaking ACC II	70	16%	58	13%
Total number of responses	435		448	
Students whose schools offered ACC	377	87%	373	83%
Students whose schools did not offer ACC	58	13%	75	17%
Total number of responses	435		448	
Students who were discouraged by school authorities from taking ACC at school	77	18%	80	18%
Total number of responses	435		448	
Students who, on reflection, felt that ACC should have formed part of their subject package	339	78%	364	81%
Students who, on reflection, felt that ACC should not have formed part of their subject package	44	10%	34	8%
Students who, on reflection, are unsure whether ACC should have formed part of their subject package	52	12%	50	11%
Total number of responses	435		448	
Students who felt school ACC provides a good grounding for ACC I	280	64%	248	55%
Students who felt school ACC does not provide a good grounding for ACC I	44	10%	55	12%
Students who were unsure whether school ACC provides a good grounding for ACC I	111	26%	145	33%
Total number of responses	435		448	
Students who felt school ACC assists a student in understanding concepts in ACC I	320	74%	297	66%
Students who felt school ACC does not assist a student in understanding concepts in ACC I	31	7%	36	8%
Students who were unsure whether school ACC assists a student in understanding concepts in ACC I	84	19%	115	26%

Table 5.1 continued

	1988		1989	
	TOTAL	%	TOTAL	%
Total number of responses	435		448	
Students who felt school ACC assists a student in saving time in ACC I	270	62%	253	56%
Students who felt school ACC does not assist a student in saving time in ACC I	79	18%	88	20%
Students who were unsure whether school ACC assists a student in saving time in ACC I	86	20%	107	24%
Total number of responses	435		448	
Students who felt the ACC I course proceeds too quickly	274	63%	312	70%
Students who felt the ACC I course does not proceed too quickly	115	26%	87	19%
Students who were unsure whether the ACC I course proceeds too quickly	46	11%	49	11%

Table 5.2

**RESPONSES OF MATRIC ACCOUNTING STUDENTS PRESENTLY UNDERTAKING ACCOUNTING I**

	1988		1989	
	TOTAL	%	TOTAL	%
Total number of responses of ACC I students	435		448	
Respondents who had opted for ACC as part of their subject package at school	224	51%	235	52%
Respondents who had opted for ACC as part of their subject package at school	224		235	
Matric ACC students who felt their study of ACC at school had motivated them to pursue their studies in ACC at university level	162	72%	157	67%
Matric ACC students who felt their study of ACC at school had not motivated them to pursue their studies in ACC at university level	49	22%	53	22%
Matric ACC students who were unsure whether their study of ACC at school had motivated them to pursue their studies in ACC at university level	13	6%	25	11%
Respondents who had opted for ACC as part of their subject package at school	224		235	
Matric ACC students who felt that they were encouraged to adopt a "thinking" approach to ACC at school as opposed to a "bookkeeping" approach	88	39%	131	56%
Matric ACC students who felt they were not encouraged to adopt a "thinking" approach to ACC at school as opposed to a "bookkeeping" approach	104	47%	74	31%
Matric ACC students who were unsure that they were encouraged to adopt a "thinking" approach to ACC at school as opposed to a "bookkeeping" approach	32	14%	30	13%
Respondents who had opted for ACC as part of their subject package at school	224		235	
Matric ACC students who felt that their school ACC teacher had stimulated their interest in pursuing ACC at university level	109	49%	146	62%

Table 5.2 continued

	1988		1989	
	TOTAL	%	TOTAL	%
Respondents who had opted for ACC as part of their subject package at school	224		235	
Matric ACC students who are currently approached by students who had not studied ACC up to matric level, for assistance in ACC I	128	57%	138	59%
Respondents who had opted for ACC as part of their subject package at school	224		235	
Matric ACC students who are currently approached by students who had studied ACC up to matric level, for assistance in ACC I	47	21%	58	25%
Respondents who had opted for ACC as part of their subject package at school	224		235	
Matric ACC students who felt that the school ACC syllabus is largely relevant to their studies in ACC I	119	53%	130	55%
Matric ACC students who felt that the school ACC syllabus is not largely relevant to their studies in ACC I	65	29%	57	24%
Matric ACC students who were unsure that the school ACC syllabus is largely relevant to their studies in ACC I	40	18%	48	21%
Respondents who had opted for ACC as part of their subject package at school	224		235	
Matric ACC students who felt ACC I topics merely repeated work covered in school ACC	111	50%	71	30%
Respondents who had opted for ACC as part of their subject package at school	224		235	
Matric ACC students who felt that repetition of school ACC topics made them complacent in ACC I	88	39%	66	28%
Respondents who had opted for ACC as part of their subject package at school	224		235	
Students who had done ACC up to matric level, who felt that school ACC is a good grounding for ACC I	163	73%	1633	69%

Table 5.3

**ANALYSIS OF RESPONSES OF ACCOUNTING I STUDENTS WHO HAD CHOSEN MATRIC ACCOUNTING IN COMPARISON TO THE RESPONSES OF STUDENTS WHO HAD CHOSEN ALTERNATIVE COURSES AT HIGH SCHOOL LEVEL**

	1988		1989	
	TOTAL	%	TOTAL	%
Total number of responses of ACC I students	435		448	
Respondents who had opted for ACC as part of their subject package at school	224	51%	235	52%
Respondents who had NOT opted for ACC as part of their subject package at school	211	49%	213	48%
Respondents who had NOT opted for ACC as part of their subject package at school	211		213	
Students who had not done ACC up to matric level, who felt that they should have done	148	70%	154	72%
Students whose schools did not offer ACC	58		75	
Students whose schools did not offer ACC as a subject, who felt that they should have undertaken ACC at school	50	86%	59	81%
Students who were discouraged by school authorities from taking ACC at school	77		80	
Students who were discouraged from undertaking ACC at school, who felt that they should have done ACC up to matric level	59	77%	68	85%
Respondents who had opted for ACC as part of their subject package at school	224		235	
Students who had done ACC up to matric level, who felt that the ACC I course proceeds too quickly	132	59%	146	62%
Respondents who had NOT opted for ACC as part of their subject package at school	211		213	
Students who had not done ACC up to matric level, who felt that the ACC I course proceeds too quickly	142	67%	166	78%

Table 5.3 continued

	1988		1989	
	TOTAL	%	TOTAL	%
Respondents who had opted for ACC as part of their subject package at school	224		235	
Students who had done ACC up to matric level, who felt that they experienced difficulties in ACC I	130	58%	126	54%
Respondents who had NOT opted for ACC as part of their subject package at school	211		213	
Students who had not done ACC up to matric level, who felt that they experienced difficulties in ACC I	166	79%	179	84%

Table 6.1

## SUMMARY OF RESPONSES FROM MEMBERS OF NED SUBJECT COMMITTEE

	NUMBER	%
Total number of responses	13	100%
Those who feel that the "Thinking" approach is as step in the right direction	13	100%
Those who had noticed a difference in style of Natal matric Acc papers as opposed to those of other provinces	11	85%
Those who feel that the NED matric Acc papers have had a positive effect on teaching methods of the majority of Acc teachers in Natal	12	92%
Those who feel that there were still some teachers who seem unable to come to terms with a "thinking" approach	11	85%
Those who feel that the present syllabus contains topics which hinder the teacher in instilling the correct approach in pupils	4	31%
Those who do not feel the present syllabus contains topics which hinder the teacher in instilling the correct approach in pupils	5	38%
Those who agree school Acc pupils lack flexibility which is required at University level	5	38%
Those who do not agree school Acc pupils lack flexibility which is required at University level	4	31%
Those who feel school Acc teachers in Natal are still too textbook-bound	11	85%
Those who feel the list of theory topics is too restrictive	3	23%
Those who do not feel the list of theory topics is too restrictive	8	62%
Those who welcome the introduction of the theory component in the new syllabi	13	100%
Those who feel that the academic quality of the Acc pupil in Natal has improved	11	85%

Table 7.1

## RESPONSES TO QUESTIONNAIRE TO MATRIC ACCOUNTING TEACHERS

	TOTAL	%
Total number of matric Acc teachers	126	
Number of respondents	111	
Those who taught old and new syllabi	73	66%
Those who believed the new syllabus is more relevant to pupils	93	85%
Those who believed the new syllabus is less relevant to pupils	2	2%
Those who believed the new syllabus is more relevant to pupils who will not attend university	73	66%
Those who believed the new syllabus is more interesting to pupils	82	75%
Those who believed the new syllabus is less interesting to pupils	0	0%
Those who believed the new syllabus is more interesting to teach	83	75%
Those who believed the new syllabus is less interesting to teach	2	2%
Those teachers who believed that their teaching methods have changed under the new syllabus	56	51%
Those teachers who believed that their teaching methods have not changed under the new syllabus (Many of these teachers feel that their methods have always been in accordance with that which is now suggested)	21	20%
Those who felt that the emphasis on "Accounting" as opposed to "Bookkeeping" was now more appropriate	74	67%
Those who felt that the emphasis on "Accounting" was insufficient	17	15%
Those who felt that there was too much emphasis on "Accounting"	13	12%
Those who felt testing of insight in the matric Higher Grade was now appropriate	77	70%
Those who felt testing of insight in the matric Higher Grade was still insufficient	5	5%
Those who felt there was too much testing of insight in the matric Higher Grade	19	17%
Those who felt testing of theory in the matric Higher Grade was now appropriate	50	45%
Those who felt testing of theory in the matric Higher Grade was still insufficient	43	39%

Table 7.1 continued

	TOTAL	%
Those who felt there was too much testing of theory in the matric Higher Grade	14	13%
Those who felt the subject as taught in Natal no longer contains mere regurgitation of set procedures by pupils	58	53%
Those who felt the subject as taught in Natal still contains mere regurgitation of set procedures by pupils	23	21%

Table 8.1

## SUMMARY OF RESPONSES FROM UNIVERSITY ACCOUNTING LECTURERS

Note: MA student = student who has studied matric accounting  
 NMA student = student who has not studied matric accounting

	NUMBER	%
Number of respondents	13	100%
Those who are conversant with the contents of the school Acc syllabus	10	77%
Those who feel that the MA student will obtain better marks than the NMA student at the end of the Acc I year	7	54%
Those who feel that the MA student will not necessarily obtain better marks than the NMA student at the end of the Acc I year	4	31%
Those who feel that the MA student will obtain better marks than the NMA student at the half-way stage of the the Acc I year	13	100%
Those who feel that the MA student will not necessarily obtain better marks than the NMA student at the half-way stage of the Acc I year	0	0%
Those who feel that the MA student has a better chance of passing Acc I at the first attempt, than the NMA student	9	69%
Those who feel that the MA student does not necessarily have a better chance of passing Acc I at the first attempt, than the NMA student	3	23%
Those who feel that the MA student is more likely to proceed through to a Dip.Acc. or C.T.A. than the NMA student	4	31%
Those who feel that the MA student is not necessarily more likely to proceed through to a Dip.Acc. or C.T.A. than the NMA student	4	31%
Those who felt that the school Acc syllabus is of relevance to the Acc I student	11	85%
Those who felt that the school Acc syllabus is not of relevance to the Acc I student	1	8%
Those who felt that the school Acc syllabus is still too orientated towards "bookkeeping"	8	62%
Those who felt that the school Acc syllabus is not too orientated towards "bookkeeping"	5	38%

Table 8.1 continued

	NUMBER	%
Those who are aware of the "thinking" approach in Natal schools in Acc	2	18%
Those who felt that the level and quality of training of school Acc teachers has created problems for them as University lecturers	8	62%
Those who felt that the level and quality of training of school Acc teachers has not created problems for them as University lecturers	1	8%
Those who feel that MA students tend to become complacent in Acc I	9	69%
Those who feel that MA students do not tend to become complacent in Acc I	4	31%
Those who feel that MA students are less adaptable to new or different approaches in Acc I	11	85%
Those who felt that Acc I lecturers are faced with a major problem due to the fact that some students had studied Acc at school whereas others had not (Note that the majority feel that this problem is solved through a differentiated approach in Acc 1)	12	92%
Those who feel that a supplementary course at University is necessary for NMA students	10	77%

Table 9.1

**SUMMARY OF RESPONSES OF TRAINING OFFICERS OF ACCOUNTING FIRMS IN THE DURBAN AREA**

	ALL FIRMS TOTAL	%	LARGEST 10 TOTAL	%
Total number of respondents	28		10	
Those conversant with contents of the school Acc syllabus	5	18%	3	30%
Those who have seen the 1987 to 1990 NED matric Acc papers	0	0%	0	0%
Those who believe that school Acc is of benefit to the student who wishes to follow a career in Acc	24	86%	9	90%
Those who disagree that school Acc is of benefit to the student who wishes to follow a career in Acc	2	7%	0	0%
Those who believe that school Acc is a valuable recruiting tool for the Acc profession	22	79%	8	80%
Those who disagree that school Acc is a valuable recruiting tool for the Acc profession	2	7%	0	0%
Those who believe that the first-year trainee accountant with matric Acc is more proficient at tasks	20	71%	7	70%
Those who disagree that the first-year trainee accountant with matric Acc is more proficient at tasks	3	11%	0	0%
Those who believe that the first-year trainee accountant with matric Acc is less adaptable to new approaches	2	7%	1	10%
Those who disagree that the first-year trainee accountant with matric Acc is less adaptable to new approaches	20	71%	7	70%
Those who believe that school Acc is of benefit to the entrepreneur who does not follow a career in Acc	22	79%	10	100%
Those who are aware of the "thinking" approach adopted in Natal schools in Acc	9	32%	5	50%
Those who believe that the school Acc syllabus is too orientated towards "bookkeeping"	6	21%	2	20%
Those who believe that the matric Acc pupil is more likely to proceed through to a Dip.Acc. than the non-matric Acc pupil	10	36%	2	20%
Those who believe that the matric Acc pupil is not more likely to proceed through to a Dip.Acc. than the non-matric Acc pupil	9	32%	2	20%

**Table 10.1****COMPOSITION OF ACCOUNTING I STUDENT GROUP (ALL STUDENTS)**

	TOTAL	PERCENTAGE
1988 TOTAL GROUP	487	100%
MA	243	50%
NMA	244	50%
1989 TOTAL GROUP	453	100%
MA	245	54%
NMA	208	46%
1989 TOTAL GROUP REVISED AFTER TRANSFERS TO BUS.ACC.	361	100%
MA	227	63%
NMA	134	37%
1990 TOTAL GROUP	377	100%
MA	284	75%
NMA	93	25%

**Table 10.2****COMPOSITION OF ACCOUNTING I STUDENT GROUP (NED STUDENTS ONLY)**

	TOTAL	PERCENTAGE
1988 TOTAL SUBGROUP	320	100%
MA	135	42%
NMA	185	58%
1989 TOTAL SUBGROUP	298	100%
MA	137	46%
NMA	161	54%
1989 SUBGROUP REVISED AFTER TRANSFERS TO BUS.ACC.	230	100%
MA	128	56%
NMA	102	44%
1990 TOTAL SUBGROUP GROUP	201	100%
MA	133	66%
NMA	68	34%

Table 10.3

## ANALYSIS OF DROP-OUT RATE (ALL STUDENTS)

	GROUP TOTAL	DROP-OUTS TOTAL	DROP-OUT PERCENTAGE
1988 TOTAL GROUP	487	72	15%
MA	243	19	8%
NMA	244	53	22%
1989 TOTAL GROUP	453	138	30%
MA	245	28	11%
NMA	208	110	53%
1989 TOTAL GROUP REVISED AFTER TRANSFERS TO BUS.ACC.	361	46	13%
MA	227	10	4%
NMA	134	36	27%
1990 TOTAL GROUP	377	39	10%
MA	284	14	5%
NMA	93	25	27%

Table 10.4

## ANALYSIS OF DROP-OUT RATE (NED STUDENTS ONLY)

	GROUP TOTAL	DROP-OUTS TOTAL	DROP-OUT PERCENTAGE
1988 TOTAL SUBGROUP	320	39	12%
MA	135	6	4%
NMA	185	33	18%
1989 TOTAL SUBGROUP	298	94	32%
MA	137	13	9%
NMA	161	82	51%
1989 SUBGROUP REVISED AFTER TRANSFERS TO BUS.ACC.	230	27	11%
MA	128	4	3%
NMA	102	23	23%
1990 TOTAL SUBGROUP	201	22	11%
MA	133	6	5%
NMA	68	16	24%

Table 10.5

## ANALYSIS OF DROP-OUT RATE BY CATEGORY (NED PUPILS ONLY)

## 1. STUDENTS WITH MATRIC POINTS 42 AND ABOVE

	1988		1989		REVISED 1989		1990	
	NO. OF STUDENTS	DROP OUT	NO. OF STUDENTS	DROP OUT	NO. OF STUDENTS	DROP OUT	NO. OF STUDENTS	DROP OUT
MA	21	0 0%	25	0 0%	25	0 0%	25	0 0%
NMA	21	2 9%	28	7 25%	21	0 0%	13	2 15%

## 2. STUDENTS WITH MATRIC POINTS 38 TO 41

	1988		1989		REVISED 1989		1990	
	NO. OF STUDENTS	DROP OUT	NO. OF STUDENTS	DROP OUT	NO. OF STUDENTS	DROP OUT	NO. OF STUDENTS	DROP OUT
MA	24	0 0%	39	2 5%	37	0 0%	37	1 3%
NMA	36	6 17%	36	15 42%	26	5 19%	16	3 19%

## 3. STUDENTS WITH MATRIC POINTS 35 TO 37

	1988		1989		REVISED 1989		1990	
	NO. OF STUDENTS	DROP OUT	NO. OF STUDENTS	DROP OUT	NO. OF STUDENTS	DROP OUT	NO. OF STUDENTS	DROP OUT
MA	31	2 7%	49	4 8%	46	1 2%	38	2 5%
NMA	42	7 17%	50	28 56%	32	10 31%	21	4 19%

## 4. STUDENTS WITH MATRIC POINTS 32 TO 34

	1988		1989		REVISED 1989		1990	
	NO. OF STUDENTS	DROP OUT	NO. OF STUDENTS	DROP OUT	NO. OF STUDENTS	DROP OUT	NO. OF STUDENTS	DROP OUT
MA	37	0 0%	14	2 14%	12	0 0%	27	1 4%
NMA	47	12 25%	31	17 55%	20	6 30%	15	5 33%

## 5. STUDENTS WITH MATRIC POINTS 31 AND LESS

	1988		1989		REVISED 1989		1990	
	NO. OF STUDENTS	DROP OUT	NO. OF STUDENTS	DROP OUT	NO. OF STUDENTS	DROP OUT	NO. OF STUDENTS	DROP OUT
MA	22	4 18%	10	5 50%	8	3 38%	6	2 33%
NMA	39	6 15%	16	15 94%	3	2 67%	3	2 67%

Table 10.6

**UNPAIRED T-TEST ON MATRIC POINTS OF DROP-OUTS OF MA STUDENTS  
COMPARED TO NMA STUDENTS (NED STUDENTS ONLY, TRANSFERS TO  
BUSINESS ACCOUNTING I NOT CONSIDERED)**

Note: MA = Students with Accounting up to matric level  
 NMA = Students with no matric Accounting  
 Mean = Mean of students' matric points  
 SD = Standard Deviation from the mean  
 N = Number of students in that category  
 p = Probability that there is no difference  
 between the means

	COMPOSITE		1988		1989		1990	
	MA	NMA	MA	NMA	MA	NMA	MA	NMA
Mean	31,0	35,2	30,7	35,0	28,3	35,0	33,2	35,9
SD	5,2	4,2	4,8	4,7	6,3	3,4	4,5	4,4
N	16	72	6	33	4	23	6	16
p	<0,001		0,043		0,131		0,216	

Table 10.7

**UNPAIRED T-TEST ON MATRIC POINTS OF DROP-OUTS COMPARED TO STUDENTS REMAINING IN THE ACCOUNTING I COURSE**

Note: MA = Students with Accounting up to matric level  
 NMA = Students with no matric Accounting  
 Mean = Mean of students' matric points  
 SD = Standard Deviation from the mean  
 N = Number of students in that category  
 p = Probability that there is no difference between the means

	MA STUDENTS		NMA STUDENTS	
	Remaining in Accounting I	Drop-outs	Remaining in Accounting I	Drop-outs
Mean	37,3	31,0	36,5	35,2
SD	4,6	5,2	5,5	4,2
N	380	16	283	72
p	<0,001		0,053	

**Table 10.8****PASS RATE : ALL STUDENTS**

	GROUP TOTAL	PASSES TOTAL	PASS PERCENTAGE
1988 TOTAL GROUP	487	258	53%
MA	243	172	71%
NMA	244	86	35%
1989 TOTAL GROUP	453	230	51%
MA	245	173	71%
NMA	208	57	27%
1989 TOTAL GROUP REVISED AFTER TRANSFERS TO BUS.ACC.	361	230	63%
MA	227	173	76%
NMA	134	57	43%
1990 TOTAL GROUP	377	247	66%
MA	284	211	74%
NMA	93	36	39%

**Table 10.9****PASS RATE : NED STUDENTS ONLY**

	SUBGROUP TOTAL	PASSES TOTAL	PASS PERCENTAGE
1988 TOTAL SUBGROUP	320	190	59%
MA	135	111	82%
NMA	185	79	43%
1989 TOTAL SUBGROUP	298	163	55%
MA	137	111	81%
NMA	161	52	32%
1989 SUBGROUP REVISED AFTER TRANSFERS TO BUS.ACC.	230	163	71%
MA	128	111	87%
NMA	102	52	51%
1990 TOTAL SUBGROUP	201	138	69%
MA	133	110	83%
NMA	68	28	41%

Table 10.10

## ANALYSIS OF PASS RATE BY CATEGORY (NED PUPILS ONLY)

## 1. STUDENTS WITH MATRIC POINTS 42 AND ABOVE

	1988		1989		REVISED 1989		1990	
	NO. OF STUDENTS	PASS	NO. OF STUDENTS	PASS	NO. OF STUDENTS	PASS	NO. OF STUDENTS	PASS
MA	21	21 100%	25	24 96%	25	24 96%	25	25 100%
NMA	21	17 81%	28	19 68%	21	19 90%	13	8 62%

## 2. STUDENTS WITH MATRIC POINTS 38 TO 41

	1988		1989		REVISED 1989		1990	
	NO. OF STUDENTS	PASS	NO. OF STUDENTS	PASS	NO. OF STUDENTS	PASS	NO. OF STUDENTS	PASS
MA	24	24 100%	39	36 92%	37	36 97%	37	33 89%
NMA	36	19 53%	36	14 39%	26	14 54%	16	12 75%

## 3. STUDENTS WITH MATRIC POINTS 35 TO 37

	1988		1989		REVISED 1989		1990	
	NO. OF STUDENTS	PASS	NO. OF STUDENTS	PASS	NO. OF STUDENTS	PASS	NO. OF STUDENTS	PASS
MA	31	28 90%	49	37 76%	46	37 80%	38	31 82%
NMA	42	19 45%	50	11 22%	32	11 34%	21	4 19%

## 4. STUDENTS WITH MATRIC POINTS 32 TO 34

	1988		1989		REVISED 1989		1990	
	NO. OF STUDENTS	PASS	NO. OF STUDENTS	PASS	NO. OF STUDENTS	PASS	NO. OF STUDENTS	PASS
MA	37	28 76%	14	9 64%	12	9 75%	27	18 67%
NMA	47	12 26%	31	8 26%	20	8 40%	15	4 27%

## 5. STUDENTS WITH MATRIC POINTS 31 AND LESS

	1988		1989		REVISED 1989		1990	
	NO. OF STUDENTS	PASS	NO. OF STUDENTS	PASS	NO. OF STUDENTS	PASS	NO. OF STUDENTS	PASS
MA	22	10 46%	10	5 50%	8	5 63%	6	3 50%
NMA	39	12 31%	16	0 0%	3	0 0%	3	0 0%

Table 10.11

## AVERAGE MARKS : ALL STUDENTS

	GROUP TOTAL	AVERAGE MARK
1988 TOTAL GROUP	487	45%
MA	243	52%
NMA	244	38%
1989 TOTAL GROUP	453	39%
MA	245	52%
NMA	208	23%
1989 TOTAL GROUP REVISED AFTER TRANSFERS TO BUS.ACC.	361	48%
MA	227	59%
NMA	134	36%
1990 TOTAL GROUP	377	49%
MA	284	53%
NMA	93	35%

Table 10.12

## AVERAGE MARKS : NED STUDENTS ONLY

	SUBGROUP TOTAL	AVERAGE MARK
1988 TOTAL SUBGROUP	320	48%
MA	135	57%
NMA	185	41%
1989 TOTAL SUBGROUP	298	39%
MA	137	56%
NMA	161	25%
1989 SUBGROUP REVISED AFTER TRANSFERS TO BUS.ACC.	230	51%
MA	128	59%
NMA	102	40%
1990 TOTAL SUBGROUP	201	50%
MA	133	56%
NMA	68	37%

Table 10.13

**AVERAGE MARKS : NED STUDENTS EXCLUDING DROP-OUTS AND TRANSFERS  
TO BUSINESS ACCOUNTING I**

	NO. OF DROP-OUTS	STUDENTS WRITING YEAR-END EXAM	AVERAGE MARK
1988 TOTAL SUBGROUP	39	281	55%
MA	6	129	60%
NMA	33	152	50%
1989 TOTAL SUBGROUP	94	203	58%
MA	12	124	62%
NMA	82	79	51%
1990 TOTAL SUBGROUP	22	179	56%
MA	6	127	59%
NMA	16	52	48%

Table 10.14

## ANALYSIS OF AVERAGE MARKS BY CATEGORY (NED PUPILS ONLY)

## 1. STUDENTS WITH MATRIC POINTS 42 AND ABOVE

	1988		1989		REVISED 1989		1990	
	NO. OF STUDENTS	AVER -AGE	NO. OF STUDENTS	AVER -AGE	NO. OF STUDENTS	AVER -AGE	NO. OF STUDENTS	AVER -AGE
MA	21	72%	25	71%	25	71%	25	70%
NMA	21	57%	28	45%	21	61%	13	48%

## 2. STUDENTS WITH MATRIC POINTS 38 TO 41

	1988		1989		REVISED 1989		1990	
	NO. OF STUDENTS	AVER -AGE	NO. OF STUDENTS	AVER -AGE	NO. OF STUDENTS	AVER -AGE	NO. OF STUDENTS	AVER -AGE
MA	24	65%	39	60%	37	63%	37	60%
NMA	36	44%	36	31%	26	42%	16	45%

## 3. STUDENTS WITH MATRIC POINTS 35 TO 37

	1988		1989		REVISED 1989		1990	
	NO. OF STUDENTS	AVER -AGE	NO. OF STUDENTS	AVER -AGE	NO. OF STUDENTS	AVER -AGE	NO. OF STUDENTS	AVER -AGE
MA	31	57%	49	54%	46	57%	38	52%
NMA	42	41%	50	20%	32	31%	21	32%

## 4. STUDENTS WITH MATRIC POINTS 32 TO 34

	1988		1989		REVISED 1989		1990	
	NO. OF STUDENTS	AVER -AGE	NO. OF STUDENTS	AVER -AGE	NO. OF STUDENTS	AVER -AGE	NO. OF STUDENTS	AVER -AGE
MA	37	56%	14	48%	12	56%	27	49%
NMA	47	35%	31	21%	20	32%	15	29%

## 5. STUDENTS WITH MATRIC POINTS 31 AND LESS

	1988		1989		REVISED 1989		1990	
	NO. OF STUDENTS	AVER -AGE	NO. OF STUDENTS	AVER -AGE	NO. OF STUDENTS	AVER -AGE	NO. OF STUDENTS	AVER -AGE
MA	22	39%	10	28%	8	36%	6	37%
NMA	39	38%	16	2%	3	12%	3	10%

Table 10.15

**UNPAIRED T-TEST ON MATRIC POINTS OF MA AND NMA STUDENTS  
(NED STUDENTS ONLY, DROP-OUTS EXCLUDED)**

Note: MA = Students with Accounting up to matric level  
 NMA = Students with no matric Accounting  
 Mean = Mean of students' matric points  
 SD = Standard Deviation from the mean  
 N = Number of students in that category  
 p = Probability that there is no difference between the means

	COMPOSITE		1988		1989		1990	
	MA	NMA	MA	NMA	MA	NMA	MA	NMA
Mean	37,3	36,5	36,0	35,1	38,0	38,4	37,9	38,0
SD	4,6	5,5	4,9	6,1	4,1	4,1	4,4	4,2
N	380	283	129	152	124	79	127	52
p	0,056		0,183		0,550		0,916	

Table 10.16

**UNPAIRED T-TEST ON ACCOUNTING I RESULTS OF MA AND NMA STUDENTS  
(DROP-OUTS AND TRANSFERS TO BUSINESS ACCOUNTING I EXCLUDED)**

Note: MA = Students with Accounting up to matric level  
 NMA = Students with no matric Accounting  
 Mean = Mean of students' Accounting I marks, expressed as a percentage  
 SD = Standard Deviation from the mean  
 N = Number of students in that category  
 p = Probability that there is no difference between the means

	COMPOSITE		1988		1989		1990	
	MA	NMA	MA	NMA	MA	NMA	MA	NMA
Mean	60,5	50,1	60,2	50,2	62,0	51,3	59,1	48,0
SD	10,9	13,4	11,4	12,9	11,0	14,9	10,1	12,3
N	380	283	129	152	124	79	127	52
p	<0,001		<0,001		<0,001		<0,001	

Table 10.17

## REGRESSION ANALYSIS OF MATRIC ACCOUNTING MARKS IN RELATION TO ACCOUNTING I RESULTS

Note: r = Pearson's Correlation Co-efficient  
 N = Number of students in that group  
 p = Probability that there is no correlation

	COMPOSITE	1988	1989	1990
Correlation (r)	0,5525	0,5775	0,4977	0,6259
N	380	129	124	127
p	<0,001	<0,001	<0,001	<0,001
Regression slope	0,52	0,61	0,57	0,66
Y-intercept	36,03	20,87	23,27	13,90
Variance about Regression	71,65	87,22	91,40	62,36

Table 11.1

COMPOSITION OF 1991 DIP.ACC. STUDENT GROUP IN COMPARISON  
TO THE 1988 ACCOUNTING I STUDENT GROUP (ALL STUDENTS)

Note: MA = Students with Accounting up to matric level  
NMA = Students with no matric Accounting

	TOTAL	PERCENTAGE
1988 ACCOUNTING I GROUP	487	100%
MA	243	50%
NMA	244	50%
1991 DIP.ACC. GROUP	117	100%
MA	75	64%
NMA	42	36%

Table 11.2

COMPOSITION OF 1991 DIP.ACC. STUDENT GROUP IN COMPARISON  
TO THE 1988 ACCOUNTING I STUDENT GROUP (NED STUDENTS ONLY)

Note: MA = Students with Accounting up to matric level  
NMA = Students with no matric Accounting

	TOTAL	PERCENTAGE
1988 ACCOUNTING I GROUP	320	100%
MA	135	42%
NMA	185	58%
1991 DIP.ACC. GROUP	88	100%
MA	54	61%
NMA	34	39%

**Table 11.3**

**COMPOSITION OF 1991 DIP.ACC. STUDENT GROUP  
(NED STUDENTS WHO MATRICULATED IN 1987 ONLY)**

Note: MA = Students with Accounting up to matric level  
NMA = Students with no matric Accounting

	TOTAL	PERCENTAGE
1991 DIP.ACC. GROUP	41	100%
MA	24	59%
NMA	17	42%

**Table 11.4**

**PROGRESS OF DIP.ACC. GROUP IN PREVIOUS YEARS OF STUDY**

	STUDENTS WITH MATRIC ACC		STUDENTS WITH NO MATRIC ACC	
	No.	%	No.	%
Total number of respondents	75	100%	42	100%
Those who had repeated Acc I	2	3%	8	19%
Those who had repeated Acc II	15	20%	8	19%
Those who had repeated Acc III	12	16%	3	7%
Those who had not repeated at any stage	50	67%	27	64%

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