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THE EFFECTS OF HIGH SCHOOL ACCOUNTING STUDY
ON FIRST YEAR STUDENTS' PERFORMANCE IN FINANCIAL
ACCOUNTING AT SELECTED SOUTH AFRICAN UNIVERSITIES.

DISSERTATION

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(ii)

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ABSTRACT

This thesis examines the opinions of a sample of accounting students and a sample of accounting lecturers regarding the effect of prior study of accounting on performance in the first year university financial accounting course. A comparison is also made of actual performance in the first year course of two groups of students, those who have studied accounting at secondary school and those who have not.

For the comparison of actual performance data were collected over a three year period (1985-1987). Two separate research designs were used to test for differences in performance. Both research designs indicated that students with secondary school accounting scored higher on early tests and examinations but that the two groups of students scored equally on the final examination.

The survey of students' opinions included students from two universities. The major findings showed that students, regardless of whether or not they had studied accounting at secondary level, believed those who had to be advantaged in the first year financial accounting course. The majority of respondents indicated that high school accounting was, in their opinion, a desirable preparation for the university course.

(iii)

The survey of lecturers' opinions included lecturers from 15 South African universities. The findings of primary concern showed that lecturers believed students with prior exposure to accounting to be at an advantage in the first year financial accounting course.

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CHAPTER I

1.1 Introduction

The desirability of studying accounting at high school for those intending to continue their accounting studies at university, has been a highly contentious issue for many years. Opinions of educators vary from those strongly in favour of high school accounting as preparation for university study of accounting, to those who believe the high school subject to be undesirable and even detrimental to accounting study at university level.

This diversity of opinion is graphically illustrated by an examination of the admission policies of South African universities for students wishing to study accounting. The University of Pretoria requires that students should have studied accounting at high school and goes as far as to require a minimum grade of pass in accounting in the matriculation examination. The University of Natal (Pietermaritzburg) lays down no such admission requirement but expects students without school accounting to attend a pre-semester course. Students with school accounting are not required to attend this course. Rhodes University distinguishes in no way at all between students with and without school accounting. Policies adopted at these three universities serve as examples to indicate the different approaches adopted by South African universities, and are indicative of the diversity of opinion which exists regarding the desirability of school accounting for those enrolling in the university accounting course.

What of the opinions of high school educators? A significant number of "private" schools do not offer accounting as an option within the curriculum. There are undoubtedly a variety of reasons for this, but it is reasonable to conclude that the schools do not regard school accounting as a significant, or necessary, preparation for university accounting study. On the other hand many schools do offer accounting as an option within the curriculum and it may safely be assumed that numerous school teachers of accounting believe their subject to be beneficial to accounting study at university.

The status of accounting as a matriculation exemption subject is currently under review (Appendices 1, 2 and 3). Quite naturally this has resulted in reaction from those involved in high school accounting as they perceive that non-exemption status for their subject will result in few, if any, pupils choosing the subject if they have any intention of proceeding to university after matriculating. A letter written by Drysdale to the South African Institute of Chartered Accountants in May 1987 amply illustrates this point (Appendix I). Paragraph 5 of his letter states:

5. Teachers of the subject at high school level are not going to be happy teaching a subject that has been relegated to "the back seat" so to speak. (1)

Drysdale made it clear in his letter that he believes that the universities have motivated for the removal of accounting from the list of matriculation exemption subjects. He also made it clear that he considered the universities to be ill-informed. Paragraphs 2 and 3 of his letter state:

2. They are considering this, I understand, in the light of representations from the universities who feel that the current exemption level is not difficult enough.
3. Departments of Accounting at universities are notorious in their condemnation of school accounting. To quote a professor from the Natal University "I would rather have students in Accounting I who have never done accounting before."

I feel that this attitude has assisted the pressure on the joint matriculation board and yet, to my knowledge, no accounting department has ever conducted an unbiased study as to whether accounting at school is detrimental or the opposite to students doing Accounting at University. (2)

Drysdale's concern is shared by Professor J A Cilliers (3) who, in a memorandum to the Joint Matriculation Board dated 11 December 1985 (Appendix II) and 19 May 1987 (Appendix III), expressed dismay that accounting may no longer be recognised as a matriculation exemption subject. It is clear, therefore, that high schools and universities share an interest in high school accounting insofar as it affects the study of accounting at university.

A major revision of the high school accounting syllabus occurred in the early 1970's and since then the number of students with high school accounting who enroll in university accounting courses has increased steadily. In recent years up to 50% of first year university accounting students studied the subject at school. The increasing number of students studying accounting at university who have also studied the subject at high school emphasises the need to resolve the question of the desirability of high school accounting for further study at university. Clearly the relationship of high school

accounting and the university introductory accounting course requires clarification.

McKee Fisk stated in 1966 :

It seems evident that the day has long passed when each level of education could consider itself independent of those preceding and following it. It is educationally, economically, psychologically, and socially unwarranted for students who have had work in junior high school to be required to start over or repeat work in the high school. Similarly, it is indefensible for students to be required to repeat work undertaken in high school when and if they enroll in junior college or post-secondary institutions. The same statement can be applied to colleges and universities who accept students directly from high school or junior college. (4)

This statement is particularly relevant to education in South Africa where resources in education are scarce and where the fiscus should be making every effort to spend public funds wisely.

Extensive research has been conducted in the United States, United Kingdom and Australia regarding :

- the effectiveness of prior study of accounting at high school on student achievement in university elementary accounting.
- the opinions of accounting educators and students regarding the desirability of articulation programmes for high school and university accounting courses.
- the amount of content overlap and duplication between high school and university accounting courses.
- the achievements of students in university introductory courses.

Collectively these studies reveal that students with high school accounting have an advantage in university accounting courses. The research has resulted, in some cases, in articulation programmes being introduced whereby colleges give credit for accounting courses completed in high school. Perhaps more importantly, however, the research has resulted in the realisation by university accounting educators that :

... there are two different groups of students enrolled in the introductory level financial accounting course. Anyone teaching this course must realise that he/she is not trying to communicate with a homogenous group of students ...
The instructor must recognise that each group has different needs at various points in the course. (5)

Little research of this nature has been conducted in South Africa. This thesis sets out to examine some aspects of the topic in the South African context. Only when reliable information is available can meaningful curriculum innovation take place in the accounting courses offered at South African high schools and universities. It is not to suggest that information regarding the relationship between high school and university accounting courses is the only information required for effective curriculum innovation. Information of many kinds and from many quarters is necessary, but without knowledge regarding the high school/university accounting relationship no work on the curriculum can be complete.

1.2 Phases of Research

The research conducted and reported in this thesis can be divided into

four separate phases.

1.2.1 A search of relevant literature. The literature search concentrated, inter alia, on the following aspects of the topic:-

- articulation programmes actually implemented
- the effect of secondary school accounting study on student performance in the first year university/college financial accounting course.
- the opinions of school teachers, university/college lecturers and students regarding the effect of prior accounting study on the performance of the first year university/college student.

1.2.2 A comparison of the achievement in the university introductory accounting course of those students who had studied accounting at school with the achievement of those who had not. Student performances in the first year university accounting course over a period of three years were analysed in order to determine whether students with high school exposure to accounting enjoyed a relative advantage. The null hypothesis of primary concern was: No significant differences in test and examination scores exist between students with high school accounting and students without high school accounting.

1.2.3 A survey of the opinions of university accounting students regarding :

- the advantage, if any, enjoyed by students who had taken accounting at high school.

- possible ways in which the introductory accounting course could be arranged in order to take into account the fact that some students had taken accounting at high school.

The null hypothesis of primary concern was: Students with high school accounting and those without high school accounting hold the opinion that high school accounting does not provide the student with any advantage in the first year accounting course.

1.2.4 A survey of the opinions of university lecturers of accounting regarding :

- the advantage, if any, enjoyed by students who had taken accounting at high school.
- possible ways in which the introductory accounting course could be arranged in order to take into account the fact that some students had taken accounting at high school.
- their perceptions of student opinions of the advantage, if any, enjoyed by students who had taken accounting at high school.

The null hypothesis of primary concern was: University lecturers of accounting hold the opinion that high school accounting does not provide the student with any advantage in the first year accounting course.

1.3 Limitations of the Study

1.3.1 The comparison of achievement in the university introductory accounting course was conducted at Rhodes University only. It is

possible that the characteristics of the student body, the teaching policies and the teaching methods used, limit the applicability of the findings of this investigation to Rhodes University only. The findings, therefore, only apply to the groups tested.

1.3.2 The survey of the opinions of students was conducted at Rhodes University and the University of Natal (Durban). Characteristics of the student bodies and of the courses offered at these institutions may limit the applicability of the findings of this investigation to these two universities. The findings, therefore, only apply to the groups tested.

1.3.3 The survey of the opinions of accounting lecturers was conducted at all but three of the universities in South Africa. The findings apply to the group tested, which consisted of almost the entire population of accounting academics in South Africa.

1.4. Definitions

For the purposes of this study the following operational definitions were used :

High School Accounting : The course offered at South African high schools leading to the matriculation examination. The subject is usually studied for three years from Standard 8 to Standard 10.

Bookkeeping : The course offered at American high schools. The course varies in length from one to three years.

- University Introductory Course in Accounting : A one year course in accounting commonly offered in universities (also widely referred to as Accounting I).
- Accounting Lecturers : Members of the academic staff of departments of accounting of the universities who lecture in one or more of Financial Accounting, Auditing, Taxation, Cost Accounting and Management Accounting.
- NPE Students : Students of accounting who did not take accounting at high school.
(NPE = no previous experience)
- PE Students : Students of accounting who took accounting at high school.
(PE = previous experience)

CHAPTER I

REFERENCES AND NOTES

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2. ibid., Paragraphs 2 and 3.
3. Prof. Cilliers : Chief Moderator of Accounting (Higher Grade).
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5. Bergin J.L. The Effect of Previous Accounting Study on Student Performance in the First College-Level Financial Accounting Course. Issues in Accounting Education 1983, page 28.

CHAPTER II

A SURVEY OF THE LITERATURE ON PRIOR STUDY OF ACCOUNTING AND
SUBSEQUENT PERFORMANCE

An exhaustive search of the relevant literature revealed that very little has been written in South Africa regarding the relationship between accounting study at high school and university, but that much has been written in the United Kingdom, Australia and particularly the United States.

The research conducted by J W Smith (1) in 1968 is often quoted in the subsequent literature. During the period since 1968 writing on the subject may be divided into two broad categories. Firstly, investigations into advantages, if any, enjoyed by the PE college student and secondly, articulation experiments conducted with high schools and colleges.

This survey of literature is divided, for clarity, into the following sections :

1. Literature prior to 1968.
2. J W Smith : A classroom experiment.
3. 1968 - 1988 : Articulation programmes.
4. 1968 - 1988 : The PE student and advantage in the college elementary accounting course.
5. Literature from South Africa.

2.1 Literature Prior to 1968

The research studies and periodical articles completed during the

period from World War II to 1968 invariably supported the contention that more and better articulation of high school and college accounting was desirable. The studies and articles described in this thesis are confined to the United States.

Smith, writing about this period, stated:

... while actual research has been voluminous, informal writing relative to the need for changes has been even more voluminous. (2)

In 1954, Null (3) surveyed 29 colleges and universities to determine the practices and trends in accounting education. The educators involved in the survey recognised that a problem of articulation existed but even though they had recognised the problem no action was taken. Thus none of the colleges and universities surveyed had policies which granted credit to PE students in any way. Not only was credit for previous experience never granted but arrangements for students to gain an educational advantage from their prior accounting studies, were made in only a minority of cases.

Mitchell (4), in 1965, surveyed 299 colleges and universities which awarded degrees in business teacher education in order to determine their enrolment policies. He found that only 21% gave formal recognition to PE students. Among the institutions granting formal credit there existed no general agreement regarding the best method of granting such credit. Mitchell found that:

The majority provided placement in shorthand and typewriting for the student who has completed shorthand and typewriting in high school. (5)

In the same vein Plymire wrote:

High school offerings of accounting would alleviate some of the pressure on the college business curriculum just as high school typewriting has made many college typewriting courses unnecessary. (6)

Smith concluded that although research during this period had indicated that better articulation of high school and college accounting courses was desirable, little headway had been made in implementing such policies and where they were adopted there tended to be a lack of consistency. He wrote:

The student who has completed a high school course, similar in content to the college level course, is required to repeat much that he has already learned. The student who has not completed such a course is required to compete with the student who has prior knowledge of course content. The difference in the backgrounds of the students enrolled in the college level course makes it difficult for the instructor to design the course so that both groups of students are able to achieve at the highest possible level. (7)

The above statement written in the late 1960's in America is applicable to accounting education in South Africa today. Accounting lecturers in South Africa currently wrestle with the problem of classes consisting of both PE and NPE students and the resulting difficulties of course design in order for both groups to benefit optimally. In addition, South African universities, like their United States of America counterparts in the period prior to 1968, do not have consistent enrolment policies for accounting students. It already has been mentioned that the University of Pretoria, for example, has a different enrolment policy for accounting students

from that of many of the other universities in South Africa. The lack of consistent enrolment policies for accounting students at South African universities is a source of potential confusion and uncertainty among high school pupils and high school teachers who have the task of advising their pupils as to their subject choice at high school level. Smith identified this problem as being present in the United States prior to 1968. He stated:

The lack of consistency has led to confusion at both the high school and college levels. (8)

The literature of the pre-1968 period, while identifying the need for better articulation between high school and college accounting courses also identified the comparative advantage enjoyed by PE students in the college elementary course. Writing as early as 1944, Falkerts (9) offered the opinion that :

... other things being equal the best grades go to those who have previously taken bookkeeping.

He argued that PE accounting students should not be placed in the same class as NPE students, because the PE students would be required to spend time on accounting which could better be devoted to their other subjects, while the NPE students are placed at a "disadvantage". Falkerts, writing 44 years ago in America, made statements that would not be inappropriate in South Africa today.

Barbour (10) conducted a survey of accounting students, high school teachers of accounting and lecturers of accounting, in order to

determine their opinions of the value of high school bookkeeping for college accounting study. Her study revealed that the majority of those surveyed believed high school bookkeeping to be a distinct advantage to those studying accounting at college. Barbour also compared the achievement of a group of 66 PE accounting students with a matched group of 66 NPE students. She found that the PE students scored significantly higher grades in college elementary accounting than their NPE classmates.

Barbour's findings were supported by those of Howard (11) who conducted a survey of college teachers of accounting in order to ascertain their opinions regarding the relative advantage of PE students in the college introductory course. Approximately 60% of the respondents who completed Howard's questionnaire believed that the study of high school bookkeeping was advantageous for the college elementary accounting student.

Barbour's findings relating to student achievement were also supported, this time by Larsen (12), who compared the achievement of 234 college elementary accounting students. She found the mean achievement of PE students to be significantly higher than that of NPE students. She also found that college elementary grades were a relatively reliable predictor of a student's ability to complete all accounting courses required for graduation. Smith concluded from Larsen's study that:

... high school bookkeeping is of value to the student throughout his study of accounting. (13)

Herring (14) conducted a survey of all research studies dealing with the teaching of high school bookkeeping and college accounting that were completed prior to 1950. His survey revealed, inter alia, that PE students achieved better results in college elementary accounting than those without high school bookkeeping.

Bock (15), writing in 1957, made a point which was often to be repeated in later writings and research findings. He maintained that many students with high school bookkeeping find little challenge or stimulation in the early part of the college elementary accounting course. Smith summarised Bock's viewpoint succinctly:

The student may become bothered by the repetition of previous learning experiences and, as a result, tend to miss principles and concepts that are new to him. He may, as a result of not being challenged or motivated, lose ground in comparison to other students. (16)

It is significant that researchers using statistical techniques, made possible by the computer, were later to identify a PE student advantage early in the college elementary accounting course, with that benefit disappearing and even reversing later in the course. Some researchers have speculated that the inversion of initial advantage is due to students becoming bored and over confident early in the course and, therefore, failing to respond to more challenging work later. It is significant that Bock identified this tendency as early as 1957. He suggested that capable students may be turned away from accounting because of the negative effects of repeating high school work, or of becoming bored and over confident, only to find difficulties later in

the course. It is reasonable to speculate that students in this country may, today, suffer a similar fate to that envisaged by Bock.

From the writings and research of the period prior to 1968 it is clear that the majority of college accounting students and teachers believed that high school bookkeeping was beneficial to the college accounting student. The literature also identified the tendency for PE students to score significantly higher marks in the college elementary accounting course than NPE students. It is surprising to note, therefore, that very little recognition was given to students' backgrounds in the college elementary accounting courses. Smith regarded this state of affairs as unacceptable and, in order to lend weight to the arguments and research findings of the period 1944 to 1968, conducted a classroom experiment using a research design not previously employed, in the belief that his findings would complement and reinforce the contention that better articulation of high school bookkeeping and college accounting should occur.

During the pre-1968 period this topic attracted little interest in South Africa. This researcher was unable to locate any research studies or journal articles covering the topic written in South Africa. It must be noted however that during this period and, indeed, until 1977, bookkeeping taught at South African high schools was not a subject which the prospective accounting student considered taking. Bookkeeping during this period was intended mainly for girls showing an interest in secretarial work. The subject was considered unsuitable for those with the ability to enter university. The

bookkeeping syllabus was designed primarily to provide secretaries and bookkeepers with some experience of bookkeeping procedures and provided little, if any, insight into the double entry system, let alone into any theoretical aspects of accounting. It is not surprising, therefore, that because bookkeeping was seldom taken by those intending to enter university, the topic was not addressed by researchers nor by the relevant journals during this period.

2.2 J W Smith : A classroom experiment

2.2.1 Introduction

Smith identified, from prior research, the "desirability and need for curriculum and instructional change in both bookkeeping and accounting" (17) but also recognised that few changes had been made as a result of these studies. He stated:

The primary reasons for the absence of change has not been determined. However, the fact that the studies have not presented objectively determined and statistically valid evidence that can be used in dealing with the problem of articulation is undoubtedly one reason for the absence of change. (17)

2.2.2 The Classroom Experiment

Smith set out to rectify this situation by conducting an experiment that would provide the statistically valid evidence he hoped would lead to change. The experiment which he devised and conducted during the 1966/67 academic year, consisted of two phases;

- a planned classroom experiment was conducted to determine whether prior experience in high school bookkeeping affected student

performance favourably in the college elementary accounting course. A matched group of NPE students was used as a control group. The experiment was conducted at Central State College, Edmond, Oklahoma. Smith hypothesised that:

There is no significant difference between the achievement in college elementary accounting of those students who have studied high school bookkeeping and those who have not. (18)

- The second phase, also a classroom experiment conducted at Central State, was contingent upon the rejection of the hypothesis contained in the first phase, in which case Smith hoped to determine the degree of advantage of PE students. Smith hypothesised that:

For students who have completed high school bookkeeping there is no significant difference between their achievement whether they receive three or five class periods of instruction per week in the 18 week offering in college elementary accounting. (19)

Once again Smith used a matched group, this time of PE students, as a control group.

Three groups of students were identified for the purpose of the experiments:

- Group I consisted of students who had successfully completed high school bookkeeping
- Group II consisted of students with no previous study of accounting or bookkeeping
- Group III consisted of students who had successfully completed high school bookkeeping.

The first classroom experiment involved comparison of achievement of PE (Group I) students with that of NPE students (Group II). The second experiment compared the achievement of two groups of PE students (Group I and Group III) where Group III received fewer class periods of instruction than Group I.

Smith was faced with two major problems. Firstly, achievement of students was not comparable if significant differences in ability existed. He selected ACT (20) scores as the measure of student ability arguing that previous research showed that entrance tests provided valuable data for predicting achievement in college elementary accounting. An assessment and comparison of ACT programme scores was undertaken. This revealed that there was no significant difference in the abilities of the groups. Smith concluded that:

Differences in performance in the developed examinations are, therefore, attributable to the variations in student background. (21)

Smith's second problem was that there was no suitable measurement device available that would evaluate student achievement adequately. He developed three 75-question multiple choice examinations. During the course of the instructional period students from all three groups completed each of the examinations. The first examination was completed at the beginning of the course, the second after eight weeks and the third at the end of the course.

Smith chose analysis of variances as the most appropriate statistical test for comparing student achievement. Winer's two-factor analysis

of variance design for repeated measurement on one variable, examination scores, was employed.

2. 2.3 Interpretation of the data

2.2.3.1 The First Classroom Experiment : Comparative Achievement of PE and NPE Students

The hypothesis of no significant differences in achievement between the two groups was rejected at the .05 level of significance.

The difference between the college elementary examination scores of Group I and Group II was found to be significant. The college elementary accounting examination scores of the experimental group, Group I, were significantly higher than those of the control group, Group II. (22)

Smith found that Group I (PE students) students scored higher marks for each of the three tests administered. Performance levels of each group improve for each consecutive test. Smith noted that:

... the performance levels for the two groups rose at essentially the same rate. (23)

This finding is of particular interest as subsequent research indicated a decline in the relative advantage of PE students for consecutive testing periods. Research reported in Chapter 3 of this thesis indicates a gradual decline in the relative advantage of PE students and shows that by the end of the Accounting I course the advantage enjoyed by PE students is no longer significant.

2.2.3.2 The Second Classroom Experiment : Comparative Achievement in Terms of Instructional Time

The difference in achievement of Group III and Group I students was not found to be significant at the .05 level. Thus:

The difference in classroom instructional time did not contribute to differences in the performance of students who had had previous high school bookkeeping.

Students who had completed high school bookkeeping scored equally well in college elementary accounting whether they received three or five class periods of instruction per week. (24)

As was the case with the first classroom experiment the achievements of both Group I and Group III improved for each of the tests administered. Smith determined that the performance levels of the two groups rose at similar rates.

This finding is particularly significant because of the implications for curriculum innovation in the college/university introductory financial accounting course.

2.2.4 Conclusions Drawn by Smith

Smith concluded from his study that:

- PE students start the college course with an advantage over NPE students
- PE students complete the elementary course with greater knowledge of accounting than NPE students
- PE students benefit significantly from the college elementary accounting course
- NPE students will make greater progress than PE students.

Smith wrote:

... the college elementary course will tend to eliminate some of the difference initially prevailing between the groups. (25)

- PE students are able to understand and grasp accounting more easily and more quickly than NPE students
- PE and NPE students are at a disadvantage if taught in the same class.

Those who have studied bookkeeping are required to repeat much of what they have already learned. Those who have not studied bookkeeping generally receive lower grades than do those who have studied bookkeeping. (26)

Smith made the following recommendations:

- colleges should consider establishing separate classes for PE and NPE students so that PE students might be taught in a more sophisticated manner than NPE students.
- students should not be assigned to special classes solely because of their PE status. Smith recognised that some PE students achieved at lower levels than NPE students and so recommended that a 'test of accounting understanding be developed and administered' (27) and that students be placed in classes according to the results of this test.

2.2.5 Smith's Study : Comments and Criticisms

Smith's research has often been quoted and referred to since 1968 and has proved the catalyst for much related research, not only in the United States. Although Smith's experiments provided valuable insights into aspects of the topic, it must be pointed out that the research is, in some respects, severely limited.

2.2.5.1 Smith's experiments involved PE and NPE students taught in separate groups. Smith's finding that PE students enjoy an advantage may not be applicable to classes which contain both PE and NPE students. The question of PE student advantage in classes containing both categories of student has been extensively researched and will be discussed later in this chapter.

2.2.5.2 Smith did not take into account the length of the period of exposure to high school bookkeeping. Later research has indicated that this is a significant factor.

2.2.5.3 The research experiment did not consider the grade of pass achieved in high school bookkeeping. This factor has been omitted in most subsequent research with the exception of that conducted by Schroeder which is discussed below.

2.2.5.4 Smith did not consider the fact that PE students may have elected to study bookkeeping at school because of a predisposition for the subject. This aptitude for bookkeeping might have been a factor contributing to advantage in the college elementary accounting course. The question of predisposition has also been omitted from subsequent studies, probably because it has proved impossible to analyse.

Predisposition for accounting has not been included as a factor in the research reported in this thesis because of its extremely problematic nature. The writer considers the omission to be a possible weakness

in this and other studies.

2.2.5.5 Smith's study was carried out during the time when accounting and bookkeeping were, in many respects, very similar. Indeed, Smith reported, in his thesis, that the content of the high school textbook and the college elementary accounting textbook were very similar. The college accounting curriculum, and certainly the university accounting curriculum in South Africa today, bear little resemblance to the curricula of the 1960's. It is possible that high school and college/university curricula have changed to the extent that Smith's findings in 1968 are not applicable in the 1980's. It must be mentioned, however, that research continues to point out that PE students enjoy an advantage despite changes in curricula.

2.3 1968 - 1988 : Articulation Programmes

The teaching of accounting in high schools and particularly the granting of college credit for high school accounting, has received much attention in the USA over the last twenty years. Several articulation projects were undertaken and detailed reports were published. These projects were primarily concerned with establishing articulation agreements between specific high schools and colleges. The investigations included, inter alia, an analysis of the advantages of such projects for all parties concerned and some investigations examined the attitudes of those participating in the projects regarding the articulation agreements.

The researchers and educators who conducted the articulation programmes were so motivated for a number of reasons, including the fact that they believed that there existed

... overlap and duplication in high school and college curricula, particularly in the eleventh and twelfth grades and in the first two years of college. (28)

The articulation projects discussed in this thesis had a common objective to

... ease the entry of high school students into community and senior colleges, and, potentially, avoid needless duplication in curriculum practices. (29)

Although the research conducted and described in this thesis does not cover articulation programmes, it was considered appropriate to survey the literature concerning specific articulation programmes carried out in the United States, because a knowledge of these programmes gives a deeper appreciation of the relationship between high school and college/university accounting courses. Many of the lessons learned in American articulation projects have indirect implications for the research described in this thesis.

Paul Tambrino, (30) a teacher of North Babylon High School in Long Island, writing in 1968, lamented the fact that accounting was often considered inappropriate for study at high school and was often regarded as being best offered at college level. He noted that many guidance teachers and other educators showed a bias against accounting at high school level. In order to counter the tendency Tambrino and

his colleagues

established a College Placement Accounting course for selected senior students at North Babylon High School (31).

Successful completion of the course allowed students to write the New York State College Preparatory Examination and possibly earn up to 6 hours credit in the college accounting course. He noted that:

Business education is neither unique nor progressive in taking this action as other disciplines have been offering advanced placement courses for many years. (32)

Tambrino reported that the programme was so successful that a committee was formed to encourage other high schools to offer similar programmes. Unfortunately Tambrino provided no information as to how he drew his conclusions regarding the success of the North Babylon programme.

Bryce Pfaff writing in 1970 about the project referred to by Tambrino, wrote :

For the past few years, there has been growing interest in Long Island high schools in teaching accounting. After many schools instituted an accounting course, the inevitable question became, "Why shouldn't students be able to get advanced placement credits for accounting?" Convincing evidence of the interest in advanced placement credit resulted in the formation of a committee in 1966 to further explore the possibilities of having accounting added to the growing list of advanced placement subjects". (33)

Pfaff arranged a workshop at which an advanced placement accounting course was developed. This course was designed to prepare students,

inter alia, for the Advanced Placement Proficiency examination. Success in this examination gave high school pupils advanced placement in the college accounting courses. The high school course developed by Pfaff, while not falling into the category of an articulation project, nevertheless indicated the interest shown by high school and college educators in granting credit, where appropriate, in college accounting courses. Pfaff wrote:

Almost every college and university in New York State now grants advanced placement credit to students who successfully complete the New York State College Proficiency Examination. Moreover there is good reason to believe that advanced placement credit will be available on a nation wide basis in the near future. (34)

Three further articulation projects were selected for discussion. These projects were different from the Tambrino/Pfaff project in that not only did they have as an objective advanced placement, but they also attempted to ascertain the success, or otherwise, of the projects. All proved to be generally beneficial. The reports discussed below provided details of the projects and presented detailed findings and recommendations. No attempt is made in this thesis to describe these reports in detail, but rather the main aspects of the reports are summarised briefly.

2.3.1 High School - Community College Articulation Follow-up. Tobias and Everson. 1977

This project was carried out in two phases:

2.3.1.1 Phase I

This phase was conducted during the 1975/76 academic year. Queensborough Community College implemented an articulation programme that involved three of its feeder high schools. The programme was designed to make college level courses in accounting and data processing available to students of these high schools. On completion of the course the students would write a test, devised by the Queensborough Community College, which if passed at the required level, would give advanced standing at the college.

Due to unforeseen circumstances the test was not administered. Consequently neither advanced standing nor college credit was granted to any of the students in this phase. The students were surveyed in the subsequent year to assess what attitudinal, and other effects, the project had had. A sample of only seventeen of the forty-two students who participated in the project was surveyed and this is regarded as a shortcoming of the research. The results of the survey indicated:

... generally favourable attitudes towards the articulation project.

... were college credit granted, the attitudes of students would have been even more positive... (35)

The authors of the reports summarised the findings of their survey thus:

Students clearly felt that they had participated in a worthwhile experience, overwhelmingly noted that they would recommend it, and commented favourably on the practicality and usefulness of the courses. (36)

It should be noted that the absence of achievement data, due to the failure to administer a test, weakens the findings of this phase of the project.

2.3.1.2 Phase II

This phase was conducted during the 1976/77 academic year and involved the same community college and high schools as in Phase I. The same articulation programme as described in Phase I was implemented. The test designed by the community college was written by all students on completion of the course. The community college had decided that a score of 70% on the test would indicate "minimal mastery" and any score above this would qualify the student for college credit in accounting. It should be noted that the college allowed any students who claimed to have relevant experience to write a similar test and those scoring more than 70% were granted exemption from the introductory accounting course.

Of the fifty-three students who wrote the test, eleven (21%) scored above 70% and thereby qualified for exemption from the college elementary accounting course. The authors of the report noted that these results compared favourably with the average of less than 10% who passed the examination written by students with relevant experience. They noted, however, that the scores of students participating in the articulation programme were disappointingly low. It was suggested that the low scores may have been due to poor implementation of the curriculum in the high schools and felt that if these problems were solved, the proportion of students scoring above

70% on the test would be increased substantially.

The authors concluded that the articulation programme had been successful, both from the point of view of student attitudes and test achievements. They also noted that the project had met with positive reaction from staff of the high schools and college and reported with satisfaction, that:

... the continued readiness of the present schools to carry on the articulation courses, strongly suggests that from the point of view of the institutions involved, the articulation programme has accomplished the objectives set for it. (37)

2.3.2 Articulation Activity for Accounting Programs : Adams. 1982

The project conducted by the Blackhawk Technical Institute, while having similar objectives to those of the Tobias project, made no attempt to measure the degree of success achieved by students. The investigation was included in this literature survey because it showed that co-operation between secondary and post-secondary teachers of accounting is vital if students are to achieve a smooth transition between the two levels.

The objectives of the project were met during a series of meetings held between representatives of the Blackhawk Technical Institute and thirteen local high schools. During the course of these meetings the accounting curriculum of the high schools was modified and expanded, objectives were agreed upon and the representatives of both levels of institution were given the opportunity to gain an understanding of the

curriculum.

An understanding of a basic or core curriculum was needed in order to provide a smoother transition for students from one level of training to another. (38)

The project is particularly interesting because there was no intention to grant college credit for high school work. An examination of the Blackhawk Accounting I outline showed that the course was designed for those having no previous training or background in accounting. Examination of the high school course outlines revealed that all the schools identified an objective of the course as being preparation for further study of the subject.

Thus the Adams project was designed to smooth the transition from high school to college accounting without having the objective of gaining college credit for high school accounting study.

The value of this study lies in the fact that close co-operation between accounting teachers at secondary and post-secondary level is desirable and beneficial, even when college credit is not at issue. In South Africa there is no question of formal credit being granted by universities for high school accounting studies, but the problem of transition has already been identified in this thesis. Chapters VI and VII examine, inter alia, the attitudes of students and university lecturers to closer co-operation between high school teachers of accounting and their university counterparts.

2.3.3 Articulation in Accounting : Reactions of High School and Two-Year College Accounting Educators. Golen S. 1983

This study examined the reactions of educators, from sixty-eight high schools and eight two-year colleges, all in Western New York, concerning articulation between secondary and post-secondary accounting programmes. No attempt was made to measure the relative performance of PE and NPE students in college accounting courses, nor was any effort made to modify curricula in order to facilitate transfer from high school to college. The study simply examined attitudes concerning articulation given that no such agreements obtained at that time.

The researchers employed a questionnaire to ascertain attitudes. Responses were received from thirty-eight high schools (56% response) and six colleges (75% response).

2.3.3.1 Selected Responses of High School and College Educators

The questionnaire for high school teachers comprised 28 questions and that for college educators 24 questions. The questions deemed relevant to this study and the responses thereto are listed below.

- Asked if there should be an articulation agreement between high schools and colleges, 74% of the high school respondents and 50% of college respondents indicated that there should be such an agreement.

- Asked whether two years of high school accounting warranted three credit hours of college accounting, 68% of high school respondents and 67% of college respondents agreed that such credit was warranted.

- Asked whether a pass on the New York State Education Department examination (a high school level examination) was an adequate standard to grant three credit hours of college accounting, 65% of high school respondents did not agree with granting credit on the strength of such a pass. The majority of high school respondents regarded the examination to be "too easy" or of insufficiently high standard. It is interesting to note that 83% of the college educators thought that a pass in the examination would be sufficient to grant three credit hours in college accounting. Some college respondents expressed the opinion that colleges should have a hand in setting the examination.

In summary, the majority of college and high school educators favoured some sort of articulation agreement and agreed that the material covered in the high school accounting course was sufficient to grant three credit hours of college accounting.

High school and college educators held opposite views as to the adequacy of a passing grade in the New York State Regents examination as a standard for granting college credit. Golen speculated:

Perhaps a higher grade, rather than just passing, on the New York State Regents Examination could be utilised as a starting point ... further research to determine a standard mutually acceptable by both levels of institution is imperative. (39)

Golen concluded from his research that educators at both levels should be willing to work together to effect an articulation agreement. He recommended that co-operation between the two levels was

of the utmost importance in effecting a satisfactory articulation programme. (40)

The Golen study employed somewhat dubious methodology in that the questionnaire was sent to

one accounting educator at each high school and two-year college in Western New York. (41)

This limited survey resulted in only six responses from eight colleges. The researcher submits that the consequent sample size may have proved unreliable. Golen made the assumption that the single response from each institution would be representative of the opinions of the respondent's colleagues, which is considered to be a potential weakness of the study. Despite the possible flaws, the research is of value in that it has added to the growing body of opinion which supports articulation of high school and college accounting.

Golen's work complements the findings of both Tobias and Adams. All three point to the desirability of articulation programmes and

indicate that these projects elicit positive reaction from those educators and students directly involved in them.

2.4. 1968-1988 : The PE Student and Advantage in the College Elementary Accounting Course

The previous section of this chapter dealt with research conducted in the context of formal articulation programmes, where high schools and colleges had co-operated with a view to granting some form of credit in the college course for high school studies. Much research also has been conducted regarding PE student advantage in the elementary college accounting course when no effort has been made to formally articulate high school and college/university accounting courses.

These studies have been conducted to determine whether high school study of accounting/bookkeeping provides PE students in the college/university introductory course with an advantage over NPE students. Some studies have attempted to measure advantage by comparing tests and examination scores of PE and NPE students while others have examined student and teacher attitudes and opinions regarding this question.

This section of the literature review covers some of the published material concerning PE student advantage. It is particularly relevant to the research described in this thesis because the situation pertaining in South Africa is such that no effort has been made to establish articulation programmes; nor has much effort been made by universities and high schools to establish contact with a view to

smoothing the transition from high school to university accounting study.

Friedlob and Cosenza (42) conducted research which revealed that:

Students surveyed who had taken high school accounting performed better generally in first-quarter college accounting than did students who had not taken accounting in high school. In addition, students who had taken more high school accounting received better grades than students who had taken less high school accounting. (43)

Their findings contradicted, in their opinion, the attitudes of many college educators who believed high school accounting to be detrimental to college accounting study. They also noted that it was believed widely that accounting was of little importance and even undesirable for college-bound high school students, yet their studies showed this view to be unwarranted.

Friedlob and Cosenza found that the relationship between high school accounting and subsequent performance in "second-quarter" accounting study at college was not significant, but hypothesized that:

... high school accounting instruction improves student performance in first-quarter college accounting principles, and that improved performance in first-quarter accounting principles leads to improved performance in second-quarter accounting principles. (44)

Friedlob and Cosenza found that both PE and NPE college students believed that high school accounting study assisted students in the college course.

75% of the students ... felt that high school accounting instruction either was or would have been a definite help to them in their college accounting course. (45)

They concluded, in the light of their study, that accounting in the high school should be accorded its "proper importance in the curriculum".

The findings of the Friedlob and Cosenza study complement those of Smith from his classroom experiment. The important additional finding was that students believed high school accounting to be an advantage. The research described in Chapters IV - VII of this thesis is, in many respects, modelled on the Friedlob and Cosenza study in that student performance and attitudes were ascertained and that PE and NPE student performance in the Accounting I course was compared. Unfortunately, Friedlob and Cosenza did not describe the methodology which they employed to arrive at their findings. It is impossible, therefore, to comment on the accuracy or reliability of their study.

Details of methodology and statistical techniques employed were provided by Baldwin and Howe (46) in their study published in 1982. They recognised that PE students generally show a great deal of confidence regarding the first college course and noted that:

Intuitively, one might expect that students studying accounting in high school would have the advantage in university-level courses over those students who have no high school background. (47)

Baldwin and Howe set out to investigate two aspects of the problem. Firstly, by replicating prior research regarding PE student relative advantage in terms of performance, and secondly, by studying drop-out patterns of PE and NPE students. Drop-out patterns had not been considered a variable in prior research and the authors considered this fact to have been a potential weakness of these studies which might have affected results. The research design, statistical techniques and sample size employed by Baldwin and Howe were considerably strengthened compared to most previous studies. It should be noted that aspects of this methodology were used in the research described in Chapter III of this thesis.

Baldwin and Howe identified three hypotheses:

Hypothesis 1 : There is no difference in student performance between those students having had high school bookkeeping and those who have not.

The findings showed that PE students performed no differently overall in the first year university course compared to NPE students. PE students did perform better on early examinations but they had lost this advantage by the final examination. Findings indicated that not only did PE students lose their initial advantage but that NPE students tended to do better on the final examination. The authors were of the opinion that the early assessment covered work with which PE students were familiar and that the PE students' early advantage may have led to weak study habits which accounted for relatively poorer results later in the course. NPE students, on

the other hand, were forced to work hard in the early part of the course and these habits stood them in good stead later.

They (PE students) may be lulled into a false sense of security during that early segment of the course and "coast" into later sections. In later portions of the course they may suddenly find themselves behind and, in some cases, unable to recover. (48)

Hypothesis 2 : There was no difference in drop-out rates between PE and NPE students.

Findings of the study indicated that comparative drop-out rates were nearly identical and the hypothesis could not be rejected.

Hypothesis 3 : There was no difference in drop-out patterns of PE and NPE students.

Findings indicated that NPE students tended to drop out earlier in the course while PE students tended to fall out later in the course. The authors regarded this pattern as indicative of prior study of accounting being a disadvantage.

Baldwin and Howe concluded from their study that PE students enjoyed no overall advantage in the first year accounting course and that poor study habits acquired early in the course proved disadvantageous later. The authors recommended that "forceful counselling" of PE students should be done to make them aware of the potential negative effect of early advantage on study habits.

No other recommendations were made. They failed to consider the option of changing the curriculum so that PE students would not be able to "coast" and thus not form the bad habits which they considered to be so dangerous. In South Africa the number of PE students entering the first year accounting course is large and indications are that numbers will continue to be significant. The recommendation that these students be "counselled" cannot be accepted as the only solution to the problem. Changes in the curriculum which would enable PE students to benefit from their early advantage, while still catering for the NPE students, would seem to be imperative.

The Baldwin & Howe study did not take into account the length of the high school course taken by students. This factor was also ignored by Smith and is considered to be a potential weakness of both studies. Later research has shown the length of the high school course to be a significant factor.

Bergin conducted a study, very similar to that of Baldwin and Howe, at the University of Wisconsin-La Crosse. The methodology used by Bergin is considered to be extremely sound, although he employed different statistical techniques to those used by Baldwin and Howe. The fact that Bergin's findings were very similar to those of Baldwin and Howe, even though he used different statistical techniques, tends to strengthen the validity of his findings. It has already been mentioned that the methodology used by Baldwin and Howe was used in the research reported in Chapter III of this thesis. The methodology and statistical techniques used by Bergin were also employed in the

research described in Chapter III in order to compare results using both techniques.

Bergin paid particular attention to the structure and content of the examinations administered during the first college course, a factor which had been largely ignored by Baldwin and Howe. Bergin wrote:

The content of the examinations used in this course was structured to provide the student with a varied test-taking opportunity. However, the extent to which the results of this study are affected by students who do not test well is undetermined. (49)

When the research described in Chapter III below was conducted it was likewise impossible to determine the effect on results of students' ability to "test".

The findings of Bergin's study showed that PE students performed significantly better on the first two of four examinations set during the year. The PE student advantage diminished from the first examination to the second. The results of the third examination showed a reversal of the trend, with NPE students having performed significantly better. Bergin ascribed this reversal to over confidence on the part of PE students. He reported that PE students indicated that they had not had to study hard early in the course and thus these poor study habits had accounted for the relatively poor achievement on the third examination. The results of the final examination showed no significant difference between PE and NPE students' achievements.

To the extent that Bergin's findings have been discussed, a striking similarity exists between his findings and those of Baldwin and Howe. It should be noted that the criticism of the earlier study also applies to Bergin's study. Bergin's study did differ insofar as drop outs were concerned. He found that the drop-out rate of NPE students was significantly higher than that of PE students. He noted:

It is reasonable to assume that the mean scores of the students who had not studied accounting previously would have been significantly lower than those who had studied accounting previously if no students were permitted to drop the course. (50)

Bergin, like Baldwin and Howe, recommended that PE students be persuaded in some way to acquire better study habits. He wrote:

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. (51)

It is gratifying that he considered modification of the curriculum as a possible solution to the problem. He suggested that different courses for PE and NPE students might be the solution and also suggested a pre-semester course for NPE students as a possibility. These curriculum modifications suggested by Bergin were used in the research described in Chapters IV and V of this thesis.

Bergin's concluding remarks are considered particularly important:

... the results of this study show that there are two different groups of students ... Anyone teaching this course must realise that he/she is not trying to communicate with a homogeneous group of students ... must recognise that each group has different needs at various points in the course. (52)

Nicholas Schroeder (53) studied both the actual effect of high school accounting on college grades and the attitude of PE students concerning the value of their high school accounting to the college course. He avoided a shortcoming of many of the studies already discussed by including as a variable the number of years of high school accounting study.

The attitudes of students were ascertained by questionnaire at the beginning and end of the course. Schroeder found that most PE students regarded their high school accounting as being of benefit for the college course. Findings showed that PE students felt, inter alia, that they were aware of what to expect in college accounting, that their high school exposure to the subject was helpful in the college course and that high school accounting reduced study time in the college course. The proportion of PE students with two years of high school accounting indicating these opinions was significantly higher than those with one year of high school accounting holding these views. This finding led Schroeder to conclude that:

Extent of HSA (high school accounting) course work was the most important determinant of responses by former HSA students. (54)

Schroeder repeated this survey with intermediate accounting students, the findings reinforcing those applicable to the first year students. He reported that the vast majority of second year students with two years of high school accounting, indicated that their high school accounting had been very helpful in the introductory college course. A substantial majority of these students agreed that their advantage due to high school accounting overflowed into the college intermediate course.

Schroeder wrote:

An even stronger endorsement of HSA (high school accounting) is contained in the nearly unanimous recommendation by students with two years of HSA that HSA be taken as an introduction to the study of accounting. (55)

The second part of Schroeder's study involved the comparison of PE and NPE students' grades in the college introductory accounting course. Once again, Schroeder distinguished between PE students with one and two years of high school accounting. He found that grades earned by PE students with one year of high school accounting were not significantly different from the grades of NPE students. However, PE students with two years of school accounting earned significantly better grades than NPE students.

Schroeder also found that PE students were less likely to drop out of the course than NPE students, a finding which coincides with that of Bergin.

Schroeder concluded:

The survey responses, difference in drop out rates and difference in introductory accounting grades, demonstrates that HSA course work may have a lasting effect on student attitudes and a short run favourable influence on college level accounting grades. (56)

Of particular importance in this study was that Schroeder showed the number of years of high school accounting to be a significant factor. This matter had been ignored by both Bergin and Baldwin and Howe and may account for their somewhat different findings.

This thesis describes, in Chapters III to V, research conducted in South Africa, where the number of years of high school accounting does not vary in that all students take at least three years of the course. Thus number of years of high school accounting was not considered a variable in this research.

Schroeder was obviously pleased with the study described above because he extended the research regarding college grades of PE and NPE students, the results being published in 1986. (57) Schroeder noted that this study was intended to extend the work done by Bergin and Baldwin and Howe, neither of which had included the number of years of high school accounting as a factor in the analysis.

The results of Schroeder's second study coincided with those of Baldwin and Howe in that PE students with one year of high school accounting out-performed NPE students early in the course, but this

advantage disappeared by the end of the course. PE students with more than one year of high school accounting out-performed all other students, including PE students with one year of high school accounting, on all examinations throughout the first year course.

Schroeder's study also revealed other significant relationships. He showed that the PE student's grade in high school accounting was significant in predicting the level of performance in the college course. High school grade had not been included as a variable in any other study and can thus be considered a weakness of these studies. Schroeder showed this factor to be significant. He also showed that students intending to major in accounting, all other things being equal, tended to score higher marks in the introductory course. He found that factors affecting the amount of study time available, such as amount of other course work, did not affect achievement levels in the college accounting course.

Schroeder concluded from his second study that:

... instructors should not only rely on the findings of these prior studies when their introductory financial accounting classes contain students with over one year of HSB (high school bookkeeping). (58)

He suggested that PE students with more than one year of high school accounting could be placed in special classes where the curriculum was designed to use their prior experience to best advantage. In making this recommendation Schroeder once again differed from Baldwin and Howe, who did not consider changes in the curriculum to be an option.

The most recent research conducted in the United States and selected for inclusion in this literature review, was conducted by Eskew and Faley and published in 1988. The authors stated:

Before the effect, if any, of high school exposure to bookkeeping/accounting can be adequately addressed however, it is necessary to isolate those factors that may be related to student academic performance overall . . . it is necessary to isolate factors that may be uniquely related to performance in collegiate introductory accounting courses. (59)

The major difference between this study and previous studies was that Eskew and Faley attempted to explain differences in examination scores by using a number of explanatory variables, only one of which was high school accounting. They attempted to identify the major determinants of student performance in the college accounting course.

The Eskew and Faley study was conducted at Purdue University in the 1983/84 academic year. They attempted to measure the effects on performance in the first college course of academic aptitude, high school grades, college grades, high school accounting, related experience and quantity of previous college study. The results of the study showed that these variables, with the exception of the last, were "all significantly related to examination performance in this introductory accounting course". (60).

The authors noted that their findings, regarding the positive effect of high school accounting on college examination performance, conflicted with the findings of some previous research. It is

evident that this was a reference to research which found that high school accounting had no effect on overall performance in the college course. The authors wrote:

... one possible explanation of the differences reported across studies is that the student populations in each study are different. More likely, however, the inability of the research designs in previous studies to control for the influence of many of the other factors shown here and in other studies to be related to overall academic performance produced specious results. (61)

Eskew and Faley suggested that their findings should help high school educators to advise their students as to subject choice. This suggestion is regarded as having particular relevance to South Africa where much high school counselling regarding accounting study is based upon inadequate information. This ignorance is excusable because no reliable facts regarding the effect of high school accounting on the university Accounting I course are available. The research reported in this thesis may partially remedy this deficiency.

Eskew and Faley also suggested that:

... knowledge of students' previous exposure to related high school courses may help accounting educators better structure their introductory courses. (62)

They suggested that the "better structures" could take the form of "pre-introductory" courses for NPE students or even of different courses for NPE and PE students. Eskew and Faley made the very important point that the cost of restructuring the introductory course

would probably be offset by a reduction in failure rates and also by a cost saving resulting from a decrease in the need to offer remedial instruction.

The question of different college/university courses for PE and NPE students has been raised by some researchers. A study to ascertain the desirability of such a policy was carried out in Australia by Hart in 1972 and reported by Hutchison and Hart in 1976 (63). They recognised the inherent problem of placing both PE and NPE students in the same class.

It is necessary to design a course which is satisfactory to both groups. The risk is that half the class will be hopelessly confused and the other half will be bored to tears. (64)

The study involved surveying students, by questionnaire, from Melbourne and Monash universities. The universities were selected because of the different policies adopted in structuring the first year accounting course. Monash placed PE and NPE students in the same class and differentiated in no way between the groups, while Melbourne distinguished between the two groups. Melbourne's PE students were offered a shorter course than that offered NPE students with the number of lectures and tutorials also being reduced.

The findings of the survey indicated that NPE students at both institutions found the course more time consuming and more difficult than did PE students. NPE students concluded that they were disadvantaged compared to PE students. Of particular interest was

that Melbourne PE students felt that they spent less time on the subject, found the subject less difficult and concluded that they were more advantaged than their Monash counterparts. Melbourne NPE students found the subject more difficult, more time consuming and considered themselves more disadvantaged than their Monash counterparts.

The authors concluded, from the survey, that "streaming in itself often tends to exaggerate differences" (65). They recognised the advantages flowing from streaming, but questioned whether the disadvantages which they had identified outweighed these benefits. Hutchison and Hart did not offer an answer to their question but recognised that if streaming was rejected, the problems associated with classes comprised of both PE and NPE students would remain.

Even if ... all institutions were to eliminate streaming ... this would not solve the problem of a fundamental difference in outlook between the matriculation and non-matriculation groups. This study demonstrates that there is a clear difference between the opinions of matriculation and non-matriculation groups, streamed or not. (66)

Unfortunately this study can be severely criticised for poor methodology, particularly regarding the samples used. The authors recognised this shortcoming.

The second aspect of the Hutchison and Hart research involved a comparison of performance of PE and NPE students at the two universities. No significant difference in performance was

identified, but once again the authors recognised the constitution of the sample as a possible explanation for this unexpected result. It may be suggested that the constitution of the sample was not the only shortcoming in methodology and, therefore, that the findings of the study should be considered with some scepticism.

The value of the Hutchison and Hart study lies in the fact that streaming of PE and NPE students may result in unforeseen disadvantages arising. This research serves to warn those responsible for curriculum planning of the first college/university course in accounting that separation of PE and NPE students may result in unfavourable outcomes and, therefore, that any changes in the curriculum should be such that disadvantages due to streaming be minimised.

The final study selected for discussion in this section, was performed by Mitchell at the University of Edinburgh in the 1983/84 academic year. (67) Mitchell pointed out that most of the research done on PE student advantage had been conducted in the United States and questioned whether findings of these studies were applicable to the United Kingdom environment. Apart from broad cultural variations, he identified the nature of the high school courses and of the university introductory courses offered in the UK as being further areas of variation. He set out, therefore, to replicate research carried out in the United States within the United Kingdom environment.

Mitchell found that PE students achieved relatively better results on the examinations set during the year, but that they enjoyed no significant advantage on the end of the year examination. More specifically, he found that PE students had a significant advantage in the computational aspects of the course. He pointed out that this may have been due to the "possession of greater numerical ability" of PE students. He concluded his study thus:

The results of this study are consistent with the view that it can be potentially rewarding for the first level university accounting student to have taken accounting ... at school. (68)

Mitchell suggested, as a result of his findings, that university educators should consider changes to the first year accounting curriculum. His suggestions included pre-semester programmes, extra lectures and additional tuition and tests. His recommendations included nothing not already suggested by researchers whose work has already been reviewed.

The particular importance of Mitchell's study is that his findings were not inconsistent with those of studies undertaken in the United States, despite the fact that both high school and first year university courses in the two countries differed substantially. The first year university course offered by most universities in the United Kingdom bears a far stronger resemblance to those offered in South Africa than to the introductory courses offered in the United States. This factor, combined with the similarity of Mitchell's findings to those of American studies, provided additional inducement for the pursuit of a similar study in South Africa.

2.5 Literature from South Africa

Very little has been published in South Africa on the subject of high school accounting and its effect on performance in the university introductory accounting course. It is believed that the dearth of studies of this nature is largely due to two factors. Firstly, the problem of university students entering the accounting course with previous exposure to high school accounting, only arose in the mid-1970's. It was mentioned in Chapter I that the high school accounting course prior to this time was essentially of a bookkeeping nature and there was no logical progression from one to the other. Thus an awareness of the very existence of PE students has only dawned during the last fifteen years, whereas in the United States the topic has been researched since well before World War II. The second reason for the dearth of studies regarding this problem, may lie in the fact that South African accounting academics, unlike many of their overseas colleagues, have, through force of circumstance, tended to concentrate on teaching rather than research. It is not suggested that research has not, and is not, taking place, but rather contended that it does not take up as much of the time of local accounting academics as it does of their counterparts abroad.

It is suspected that much of the research that has been done regarding high school accounting and its relationship to the university course has not been published. It was mentioned in Chapter I that Pretoria University has made high school accounting a pre-requisite for entry into the Accounting I course. It is unthinkable that such a course of action was taken without prior investigation. Very little published

material in this regard has come to hand so it must be assumed that much of the research has remained unpublished.

Two unpublished studies were obtained. Professor D A Clulow (69) conducted a study at the Pietermaritzburg campus of the University of Natal in 1987. He analysed results of a test which students wrote in May, which covered the first quarter's work. 80% of the test covered work which had been taught in high school, while 20% was new work. The findings of this study showed that the PE students achieved significantly better results than NPE students.

Clulow concluded that:

... school accounting for matriculation provides a good basis for accounting (Accounting I) up to at least the end of the first term. It may well be a good basis for accounting studies in the next terms, or years, but data must be awaited. (Appendix IV, page 2).

Further research, if indeed conducted by Professor Clulow, has not come to hand.

Clulow observed:

The disadvantage remains that, if this be true, the matric accounting student is not challenged during this time in accounting; and because 61% of the class did not do accounting for matric, the pace of the class is restricted. (Appendix IV, page 2).

Clulow's method of data analysis was intentionally simple, it

being restricted to percentages of PE and NPE students achieving various grades in the examination. The study failed to consider student ability as a variable, nor did it consider the grade or level of matric pass as variables. No indication was given as to method of instruction or variation of instructor. It must be pointed out, however, that the study was not intended to be academically rigorous, but rather to provide a general indication of trends. To this extent it served its purpose and it is interesting to note that the findings did not conflict with those of more rigorous studies carried out overseas.

A study conducted at the University of Cape Town analysed pass rates of PE and NPE students. Findings indicated that the pass rate of PE students was significantly higher than that for NPE students. Once again, the methodology used was intentionally simple and results cannot be regarded as anything but a general indication that PE students enjoy a higher pass rate in the university course than NPE students. No attempt was made to allow for student ability or indeed for any other variable. As with the Clulow study, there was no intention to be academically rigorous.

Scholtz and Joubert (70) conducted a study at the University of the Orange Free State in 1984, an account of which was published in 1985. They attempted to measure the relative worth of matric mathematics and matric accounting as predictors of success in the first university accounting course at the University of the Orange Free State. The findings indicated mathematics, if taken on the higher grade, to be a

good indicator of success, while matric accounting, they concluded was not a reliable indicator. They wrote:

A number of students who obtained distinctions (Higher Grade) at school had actually managed to fail Accounting. (71)

Scholtz and Joubert did not allow for any other variables, such as student ability, in their study and their methodology must, therefore, be questioned. It should be noted that neither the Scholtz and Joubert study, nor the University of Cape Town study looked into performance during the year, and thus made no attempt to identify early advantage.

Stoker et al (72) conducted an investigation into differential entrance requirements for tertiary educational institutions, the findings of which were published in 1985. The study was commissioned because of the concern expressed by the Committee of University Principals (CUP) regarding the high failure rate and high drop-out rate of university students. An attempt was made to identify the best predictors of academic success at tertiary institutions with a view to a revision of entrance requirements. Findings of the investigation indicated that school aggregate marks proved to be the best predictor of success. The results also showed that Std. 10 achievement in a particular combination of school subjects proved an effective indicator of success. Unfortunately Stoker did not look into the predictive value of high school accounting for the university course, so his work is not directly useful for this study. The

Stoker research does, however, give an indication that particular school subjects can be of some use in predicting success in related tertiary study.

Dickinson (73) conducted a study at the University of the Witwatersrand in 1983. The first year accounting class was split into several groups, one of which was comprised solely of PE students. All students were given the same assignments and tutorials and wrote the same mid-year and year-end examinations. Dickinson compared the achievements of the PE students in both examinations to those of the class as a whole (PE and NPE students). His findings are summarised in Table 2.1 (74).

Table 2.1 : Examination results PE students and all students by percentage

	Mid-year		Year-end	
	PE	All	PE	All
1st class	15,00	9,74	6,92	4,36
Upper 2nd class	8,85	8,32	6,92	4,56
Lower 2nd class	24,61	23,02	21,92	18,26
3rd class	22,69	21,50	20,00	18,97
Fail/Drop-out	71,15	62,58	55,76	46,15
	28,85	37,42	44,24	53,85
	100,00	100,00	100,00	100,00

Dickinson's conclusions are not clear. He states:

To conclude that this study supports the view that there is no difference between the two groups in terms of preference could be misleading. (75)

Dickinson suggested that the marks of PE students fell alarmingly from mid-year to year-end but seems to ignore that the marks for all students fell by a similar proportion. He suggested that PE students be

alerted to the fact that they will find it necessary to devote considerably more time to their study of accounting as the topics become more difficult and unfamiliar. (76)

In this remark Dickinson echoes the sentiments expressed by Baldwin and Howe in their study. This study may be criticised for poor methodology in that abilities of students were not taken into account, therefore comparison of achievement is not very meaningful. The study can also be criticised because PE student achievement on the examinations was not compared to NPE student achievement but rather to that of all students. It is reasonable to conclude that were it not for the PE student component of "all students" pass and grade rates would have been lower than indicated in Table 2.1. In a follow-up article (77) Dickinson defended the comparison of PE students' with all students' achievement, however his defence is considered to be inadequate and the researcher's viewpoint was unchanged.

In the follow-up article Dickinson provided statistics for the 1984 first year accounting class. Comparison of results of PE students with "all students" was inconclusive with year-end pass rates being

42,86% and 40,11% respectively.

Dickinson's research, in summary, proved inconclusive although it pointed towards PE students achieving relatively better than NPE students in 1983. Methodological flaws limit the value of the research.

2.6 Conclusion

The literature selected for inclusion in this chapter, has been divided as to the extent and nature of PE student advantage in the first college/university accounting course, but has been almost unanimous in the identification of the heterogeneous nature of the first college/university class due to the presence of both PE and NPE students. It is clear that the problem has received most attention, in the literature, in the United States. It is equally clear, from the results of recent studies, that the problem has yet to be properly solved.

Literature on the subject in South Africa is both inadequate and insufficient, yet the problem has received some attention as attested to by admission policies of some universities and the unpublished research of certain academics. The research described in the following chapters will, hopefully, encourage similar studies and thereby build a base of research findings which can be used to address the problem of high school accounting and its relationship to the university course.

CHAPTER II

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CHAPTER III

AN EMPIRICAL STUDY OF PERFORMANCE IN THE FIRST YEAR INTRODUCTORY
ACCOUNTING COURSE

3.1 Introduction

Studies carried out in the USA, UK and Australia have indicated that PE students enjoy an advantage in the first college/university accounting course. It has been impossible to locate much significant research of this nature carried out in South Africa. The research described in this chapter was intended to partially redress this situation.

The broad objective was to compare the examination and test results of PE and NPE students in the first university financial accounting course with a view to ascertaining whether either group performed significantly better than the other. The research designs employed in this chapter were based upon those by Bergin (1) and Baldwin and Howe (2) in their studies described in Chapter II. These researchers used different statistical techniques to test for differences in examination scores of PE and NPE students. It was considered that by testing the data using both the Bergin and Baldwin and Howe techniques, findings of this research would be considerably strengthened.

3.2 Description of the Study

3.2.1 Students

The study was carried out at Rhodes University. The selection of a single university is a potential weakness of the study as findings may

not be applicable to other institutions. Rhodes is a predominantly white university and draws the greatest number of its students from white schools. The vast majority of students are English speaking. To the extent that Rhodes students are English and white, it is contended that they are representative of white English university students found at other South African universities.

It is well known that education for other races in South Africa is generally inferior and this factor, together with sociological and economic factors, precludes Rhodes students from being representative of other racial groups. While the education afforded Afrikaans students is not generally regarded as inferior, sociological factors likewise preclude Rhodes students from being representative of this group.

Rhodes is situated in Grahamstown in the Eastern Cape and most first year students receive their high school education within the region, although a significant proportion of students are drawn from the other provinces and Zimbabwe (3).

3.2.2 The Accounting I Course

- One first year financial accounting course is offered. This course is compulsory for all Commerce students and is an elective in the faculties of Science, Pharmacy, Law and the Department of Journalism. Commerce students form the vast majority of the class.
- The class typically consists of approximately 270 students all of whom study full-time. The university operates a division in

East London where Accounting I is also offered with approximately 80 students registered for the course. For the purposes of this study the East London students were excluded for two reasons. Firstly, most of the East London students are part-timers. It was considered that inclusion of part-time students would introduce unforeseen factors into the study. Secondly, the course is presented by different lecturers, which again could introduce additional variables.

- The course involves three lectures a week, each being repeated once in order to cut down on the numbers attending each lecture. Approximately the same number of students attend each lecture. Class size is therefore eliminated as a variable in this study.
- The same lecturer delivered the repeat lectures, the possibility that the quality of the second lecture may have been different (better or worse) from the first was ignored, thereby eliminating the lecturer as a variable in this respect.

A potential weakness of this study lies in the fact that the whole course was not presented by a single lecturer in any of the three years (3.2.2). Topics were presented by the same lecturer in all three years except in the case of two topics presented in 1987, which were presented by a different lecturer. These two topics constituted approximately twenty per cent of the course.

Lectures were presented within the constraints of pre-prepared, highly structured notes and illustrative examples which did not allow lecturers any scope in changing course material, lecture

examples or the pace of work. The highly structured nature of the course suggests that the lecturer can, for the purposes of this study, be eliminated as a variable.

- Students were required to attend one small group tutorial per week. Groups consisted typically of thirteen students and the tutorial was of ninety minutes duration. Each group had a permanent tutor who was usually drawn from the ranks of senior students. Both the tutor and tutees were assigned to groups on a random basis. All students were required to work through identical exercises during the tutorial sessions. Homework assignments were likewise exactly the same for all students. Printed solutions for both tutorial exercises and homework assignments were made available to students on completion of the assigned work. The highly structured nature of the tutorials and the random selection of tutors and tutees suggests that the tutor can be eliminated as a variable from this study.
- Class tests were written in April and September. These tests were usually of one and a half hours duration and consisted of two or three questions. Questions were designed to test students accounting knowledge and skills as well as to test insight into theoretical aspects of the course.
- Examinations were held in June and November. The June examination was of two hours duration and the November examination of four hours. Once again the examination consisted of questions designed to test accounting knowledge and skills, and insight into accounting theory.

It should be noted that these examinations and tests were not specifically prepared for use in this investigation, as was the case in the Smith (4) study, nor was any attempt made to analyse results of particular kinds of questions. Analysis of results was based on overall performance on each test and examination.

3.2.2 Period Covered by the Study

Results of tests and examinations for three years, 1985, 1986 and 1987 were gathered and analysed. In most previous studies results of a single academic year were used. Both Bergin as well as Baldwin and Howe used results from a single academic year in their studies, as did all other researchers whose work was described in Chapter II.

It was felt that an analysis of results over a three year period would strengthen the research design. It was believed that if the findings from all three years proved similar, the degree of reliability of results would be enhanced.

3.2.4 The Sample

- Only students who had written one of the provincial or the Joint Matriculation Board (18) examinations were included in the sample. This step was taken because of the possibility of other examinations being of different standards and also because the study concerned white students (see 3.2.1 above) who were unlikely to have written any other matriculation examination. The research designs employed required that the ability of PE and NPE groups be ascertained. In this study the basis used for

determining ability was the results of the matriculation examination. Thus if matriculation examinations differed in standard the comparability of ability would be impaired.

- Only students who had entered Accounting I directly from high school were included in the study. This criterion was imposed so as to eliminate the impact of other factors on student performance. Thus:

- (i) Repeat students were not considered in the sample because their achievement in the class may have been influenced by previous exposure to Accounting I.
- (ii) Students with employment experience were excluded because the nature of their work and exposure to the business environment may have influenced performance in the Accounting I course.
- (iii) Students who had completed military service were excluded from the sample because of possible influences on attitudes to their studies resulting from a period spent in the military.

Maturity factors which may have resulted from any experiences occurring between high school and university and which may have affected performance in Accounting I, were attributed to students who had not entered university directly, and they were excluded from the sample.

It was considered that elimination of all students who did not enter university directly from school would in no way jeopardise

the findings of the study. Inclusion of such students could, on the other hand, result in the findings proving unreliable.

- Part-time students were excluded from the sample because most part-time students are employed and thus are subjected to an environment and influences which may affect performance in Accounting I. Once again it was felt that exclusion of these students would in no way detract from the findings of this study, while inclusion could influence results in an unidentifiable manner.

The population consisted of all Accounting I students not excluded in terms of any of the above constraints.

Examination and test results of all students falling within the population were gathered and analysed, the sample, therefore, consisting of the entire population. The sample was divided into two groups, depending on whether or not accounting was studied at high school level.

Table 3.1 : No. of students falling within the sample

		<u>1985</u>	<u>1986</u>	<u>1987</u>
No. of students	PE	34	35	39
	NPE	47	36	36
	TOTAL	81	71	75
		=====	=====	=====

3.2.5 The Data

Rhodes University student records are computerised and thus identification of the students falling within the parameters of the sample was a straightforward exercise. Fortunately the computerised records contained information relating to the constraints placed upon the sample and it was thus an easy task for the Student Records department to eliminate those students not required for inclusion in the sample. These records also contained the results of the June and November examinations. Results of the April and September test were procured from detailed records kept by the Department of Accounting at the university.

Details of the matriculation examination for each subject written, showing grade and result, in respect of every student falling within the sample, were provided from computerised records.

Using the data procured it was possible to draw up a list of students falling within the sample, which contained the following information: Name, Student Number, Matriculation subjects (showing grade and results), Accounting I test and examination results, PE or NPE student.

3.3 Research Design 1

The research design was based on that used by Bergin (5) in his study in that the statistical methods applied were the same. All other aspects of the design differed from his study.

3.3.1 Differences in Ability

A comparison of PE and NPE tests and examination scores would be meaningless if the abilities of the two groups had been different. There is a widely held view among educators that the high school accounting course is often selected by the "less bright" pupils. Indeed some people are under the impression that the course is designed for those who have difficulty coping with alternative high school courses. Bergin confirmed that this view is not only held in South Africa but also in the United States. He wrote that some educators believe that "students who studied accounting in high school are lower achievers". (6) Thus it was vital to ascertain whether the abilities of students in the PE group differed from those of the NPE group.

The question of ability and the measurement thereof, proved problematic. Perusal of relevant literature showed that the terms 'intelligence' or 'aptitude' are used rather than 'ability'. Gibson and Mitchell (7) point out that 'intelligence' and 'aptitude' are often used synonymously, but that:

'intelligence tests tend to provide a broad measure of overall or general ability, primarily related to one's potential for learning, whereas aptitude measures tend to focus more narrowly on specific factors'. (8)

Intelligence testing (IQ testing) dates back to the turn of the last century with the first such test being designed by Alfred Binet. Since then testing techniques have been refined and improved but have always been the subject of controversy. One area of debate has

centred on types of intelligence with the view being expressed that a measure of overall intelligence is meaningless. Gibson and Mitchell write:

These controversies have in recent generations led to some renaming with more popularly accepted labels such as academic ability, mental maturity, scholastic ability, or academic aptitude tests. (9)

Bergin, in his study, used GPA (Grade Point Average) in order to assess the quality of the student, while Baldwin and Howe used the scores from a vocabulary and qualitative skills diagnostic test. Bergin recognised that the use of GPA as a measure of intelligence had many limitations, pointing out that:

Many believe that the grade point average is more closely associated with achievement than raw intelligence ... This researcher recognises that there are many limitations to using the GPA as a measure of intelligence, but it was the best indicator available. (10)

It was decided to use the results of the matriculation examination as a measure of ability. The decision to use this measure was taken with similar reservations to those expressed by Bergin above. The results of the matriculation examination are used by universities in this country as the main determinant of their admission policies and on these grounds it was perceived to be an acceptable criterion of ability.

Having elected to use matriculation results as the measure of ability, a decision was required as to how to use these results. A number of alternatives were available.

- Mathematics results only.
- Matriculation and English result only. This is a measure favoured by many educators.
- All matriculation subjects, with additional weighting for certain subject.
- All matriculation subjects, equally weighted.

It was decided to use the last of the above alternatives as this is the assessment used by most universities in South Africa for admission purposes. Matriculation results of each student were expressed in terms of unweighted Swedish point scores (11). Swedish Point scores were allocated according to the convention set out in Table 3.2.

Table 3.2 : Unweighted Swedish Point Scores

Higher Grade		Standard Grade		A LEVEL		M LEVEL		O LEVEL	
Symbol	Swedish Points	Symbol	Swedish Points	Symbol	Swedish Points	Symbol	Swedish Points	Symbol	Swedish Points
A	8	A	6	A	10	1	8	A	5
B	7	B	5	B	9	2	7	B	4
C	6	C	4	C	8	3	6	C	3
D	5	D	3	D	7	4	5		
E	4	E	2	E	6	5	4		
F	3	F	1			6	3		
G	2	G	0						

A Mann-Whitney Test was used to test for significant differences in abilities between the two groups of students in all the years studied.

H_0 : There is no difference in ability, measured by Swedish points, between PE and NPE students.

H_a : There is a difference in ability between the two groups.

Table 3.3 : Comparison of Swedish Points

	1985	1986	1987
P. values	,7479	,0375	,9364
Mann-Whitney Test Statistic	765,50	450,00	709,50

Table 3.4 : Mean of Swedish Points

	1985	1986	1987
Mean of Swedish points : PE	32,3824	30,4571	32,3333
NPE	32,6596	32,5833	31,9167

An interpretation of the P values shows that the null hypothesis cannot be rejected in 1985 and 1987. The Mann-Whitney test shows, therefore, that there was no significant difference in ability, measured by Swedish points, between the two groups in 1985 and 1987.

The null hypothesis cannot be rejected at a 1% level of significance for 1986, but is rejected at a 5% level. It should be noted, however, that the mean of the Swedish points of NPE students for 1986 was greater than that for PE students. If the null hypothesis is not rejected, the results indicate a difference in the means of the Swedish point scores in favour of NPE students. In other words, the ability of NPE students, measured by Swedish points, was greater than that of PE students in 1986.

The comparison of abilities of PE and NPE students described in this section, indicated no significant difference in abilities in 1985 and 1987. Thus for these two years a comparison of tests and examination results would not be influenced by differing abilities. For 1986 indications were that abilities of NPE students were greater than those of PE students. This would prove a stumbling block to the research if NPE students achieved better results on tests and examinations than PE students. However if the situation was reversed, differences in abilities would strengthen research findings.

3.3.2 Analysis of Student Performance

Having resolved the question of difference in ability it was now possible to test the main hypothesis of this section of the study.

H_0 : There is no significant difference in test and examination scores between PE and NPE students in the first year financial accounting course.

H_a : There is a difference in test and examination scores between the two groups.

The statistical technique used to test this hypothesis was a two-sample, two-tailed Mann-Whitney test. This test was selected because the students' test and examination scores were ordinal data and because the test is not dependent on a normal distribution of test scores. The following assumptions of the Mann-Whitney test were considered to be met.

- There was independence within each group (PE and NPE of the sample) and mutual independence between the two groups.
- Both groups consisted of continuous random variables, although a moderate number of ties was tolerable.
- The measurement scale was at least ordinal.

The results of the tests are set out in Table 3.5 :

Table 3.5 : Comparison of test and examination scores

Mann Whitney Test Results

	1985			1986			1987		
	M.W. TEST STATISTIC	P.VALUE	H ₀	M.W. TEST STATISTIC	P.VALUE	H ₀	M.W. TEST STATISTIC	P.VALUE	H ₀
APRIL TEST	1335,00	,0000	Reject @ ,05	1107,00	,0000	Reject @ ,05	987,00	,0025	Reject @ ,05
JUNE EXAMINATION	1074,50	,0083	Reject @ ,05	868,00	,0062	Reject @ ,05	861,50	,0905	Cannot reject @ ,05
SEPTEMBER TEST	1041,00	,0205	Reject @ ,05	794,50	,0584	Cannot reject @ ,05	867,50	,0790	Cannot reject @ ,05
NOVEMBER EXAMINATION	911,00	,2834	Cannot reject	708,50	,3663	Cannot reject	768,00	,4837	Cannot reject

Table 3.6 : Test and Examination Means

		1985	1986	1987
APRIL TEST	PE	65,11	67,09	63,92
	NPE	47,62	51,72	54,78
JUNE EXAMINATION	PE	62,50	60,28	55,89
	NPE	55,40	51,38	51,06
SEPTEMBER TEST	PE	63,47	54,74	60,15
	NPE	55,38	48,86	53,72
NOVEMBER EXAM.	PE	62,64	57,68	55,41
	NPE	59,46	53,94	50,83
NO. OF STUDENTS	PE	34	35	39
	NPE	47	36	36

3.3.2.1 The April Test

The hypothesis of no difference in test scores can be rejected at the 5% level of confidence in all three years. Examination of P values indicates that the hypothesis can be rejected at even lower levels of confidence in all three years. Comparison of the means shows that mean test scores of PE students were higher than those of NPE students. It can be concluded, therefore, that PE students scored significantly higher on the April test in all three years than their NPE counterparts.

3.3.2.2 The June Examination

The hypothesis of no difference in test scores can be rejected at the 10% level of confidence in all three years. Examination of P values shows that the hypothesis can be rejected at the 1% level in 1985 and 1986. The P value for 1987 shows that the hypothesis can only be rejected at the 10% level. Once again an examination of mean test scores reveals a higher mean for PE students in all three years. It can be concluded, therefore, that PE students scored significantly higher on the June examinations in all three years than did NPE students.

3.3.2.3 The September Test

The hypothesis of no difference in test scores can be rejected at the 10% level of confidence in all three years. The hypothesis can be rejected at the 5% level of confidence in 1985. Once again mean test scores of PE students proved to be higher than those of NPE students. Results of the test showed that as in the April test and June

examination, PE students scored significantly higher in the September test, in all three years than did NPE students.

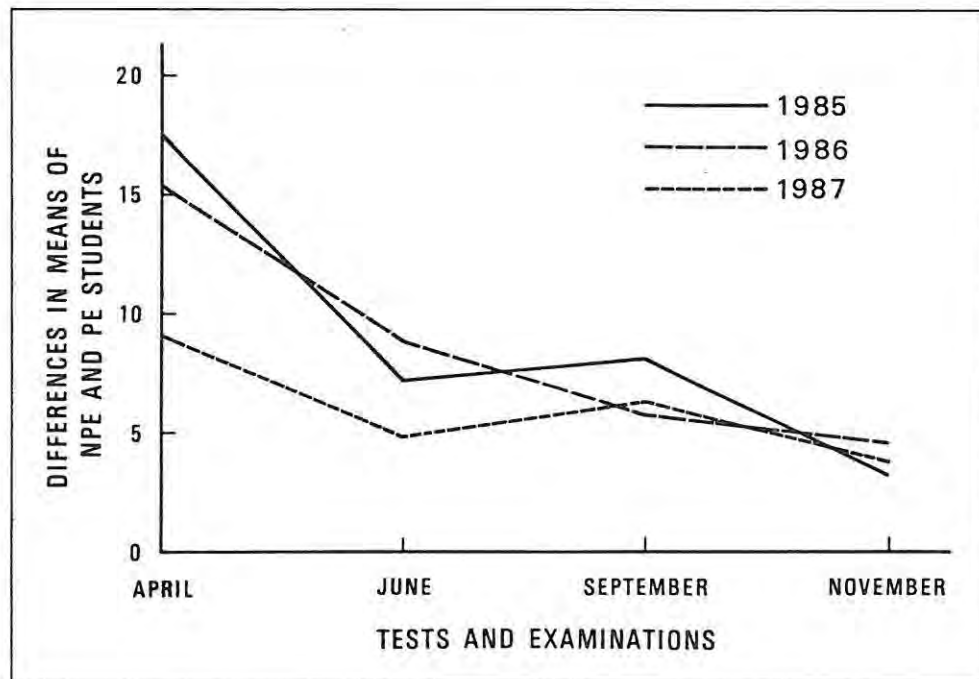
3.3.2.4 The November Examination

The hypothesis of no difference in test scores cannot be rejected in any of the three years. While the hypothesis is not rejected it is noteworthy that mean scores in this examination were higher in every year for PE students, but that the difference was not sufficient to reject the null hypothesis at any reasonable level of significance.

3.3.2.5 Trends

PE students clearly scored significantly higher than their NPE colleagues in April and this trend continued through June and September although at a decreasing level of significance. The degree of difference between the two groups narrowed with each successive test and examination, the only inconsistency being the June and September results in 1987. This trend is evident from an examination of both the P values and the means of the two groups. The graph depicted in Figure 3.1 clearly illustrates this trend. The graph plots the differences in mean scores for all tests and examinations for the three years.

Figure 3.1 Differences in Means of NPE and PE Students



Of particular interest is that while the Mann-Whitney test showed that the null hypothesis could not be rejected for the November examination, the mean examination scores for PE students were higher than those of NPE students in all three years.

An examination of the differences in means illustrated in Figure 3.1 suggests that the relative advantage enjoyed by PE students is greatest in the April test and least in the November examinations. The graph shows that the largest loss of PE student relative advantage occurred in the June examination. After the June examination the loss of relative advantage continued at a decreasing rate in 1986. In 1985 and 1987 PE student advantage rose marginally in the September test and then decreased in the November examination.

The apparent inconsistency displayed in 1986 may have been due to the difference in ability of the two groups identified in Table 3.3. This matter was discussed in Section 3.3.1 where the point was made that NPE students had a higher mean Swedish point score in 1986. This fact is reinforced by an examination of P values for 1986. The null hypothesis, of no difference in test and examination scores, is rejected in April, June and September despite the fact that NPE students were identified as having superior ability. It can be concluded, therefore, that despite a relative disadvantage in ability, as measured by Swedish points, PE students still achieved better results than NPE students in all but the final examinations.

3.3.3 Student Drop-Out

The data used in arriving at the statistics calculated in Table 3.5 included only students who had completed the course and, therefore, written all the tests and examinations. Students who dropped out of the course during the year were excluded. This was done because it was not possible to ascertain the reason for withdrawal.

Students withdraw from an accounting course for a variety of reasons, which include, inability to cope with the course, inability to cope with other courses, personal problems, disenchantment with the course and a host of other reasons. It was not possible to ascertain precisely why students had dropped out of the Accounting I course during the years under review.

The fact that drop-out students were not included in this study could result in the findings being questioned in that, if these students were included, to the extent that they had written tests and examinations, findings may have been different. The contention is supported that most students drop out of the Accounting I course due to an inability to cope with the course and, therefore, that the majority of drop-out students would achieve poor results in tests and examinations. Had these students been included in this study, it is reasonable to assume that the means of test and examination scores would have been reduced.

Table 3.7 : Student Drop-out Rates

		WROTE		DROP OUT		TOTAL
		#	%	#	%	#
1985	PE	34	82,93	7	17,07	41
	NPE	47	81,03	11	18,97	58
1986	PE	35	94,59	2	5,41	37
	NPE	36	67,92	17	32,08	53
1987	PE	39	86,67	6	13,33	45
	NPE	36	72,00	14	28,00	50

An analysis of Table 3.7 shows that in 1986 and 1987 a significantly greater proportion of NPE students dropped out of the Accounting I course than was the case with PE students. In 1985 the proportion of students dropping out was marginally lower than for PE students. It can be concluded, therefore, that proportionately fewer PE students dropped out of the course than NPE students. Had drop-outs been included in the data used to prepare Table 3.5, it is probable that the relative disadvantage of NPE students would have been accentuated.

This conclusion is supported by Bergin (12) whose findings regarding drop-outs were very similar to those of this study.

He wrote :

It is reasonable to assume that the mean scores of the students who had not studied accounting previously would have been significantly lower than those who had studied accounting previously if no students were permitted to drop the course. (13)

Baldwin and Howe (14), in their study, found that drop-out rates for the two groups were very similar but that PE students tended to drop out later in the year than NPE students. To the extent that Baldwin and Howe found drop-out rates to be similar, results of this research disagree with those of their study.

Schroeder, on the other hand, found that

The presence of any level of HSB (High School book-keeping) coursework in a student's background significantly increases the probability that the student will complete the first college course. (15)

The findings of this study agree with those of the Schroeder study in respect of drop-out rates. Schroeder made the point, with which this researcher concurs, that PE students are less likely to drop out of the course because they are aware of the nature of accounting before embarking upon the course and secondly, that they have an advantage in the first college course due to their school background and so are less likely to encounter difficulties which may, for others, lead to dropping out.

3.4 Research Design 2

This research design was based on that used by Baldwin and Howe (16) in their study, in that the statistical method applied was the same. All other aspects of the design differed from their study.

The hypothesis: There is no significant difference between mean test and examination scores of PE and NPE students.

$$H_0 : \mu_{PE} = \mu_{NPE}$$

$$H_a : \mu_{PE} \neq \mu_{NPE}$$

3.4.1 Analysis of Student Performance

The data to test the hypothesis were analysed by using a One Way Analysis of Covariance (ANCOVA). The covariate used was the Swedish points score of each student. By including Swedish points score as a covariate H_0 could be tested after allowing for any differences between the groups in Swedish points score. Swedish points score was used as a measure of ability for the reasons set out in 3.3.1 and scores were computed in exactly the same way as outlined in that section. It should be noted that Swedish points score as a measure of ability is subject to all the reservations already discussed.

The inclusion of Swedish points score as a covariate removed a potentially serious source of bias. The use of this covariate removed student ability as a factor in the analysis and allowed easier detection of true differences in the dependent variable.

The variables were, firstly, the category of student which was either PE or NPE, and secondly, the test or examination result.

An important assumption of ANCOVA is equality of slopes. A test for equality of slopes was performed. The results of this test are set out in Table 3.8. An analysis of P values shows that if a 5% level of significance is used the tests for parallelism do not indicate a problem with equality of slopes for any of the tests or examinations except for the April test in 1986. The P value for this test is less than ,05 which indicates that the results of the statistical tests for April 1986 may be unreliable.

Table 3.8 : ANCOVA Test for Equality of Slopes

	1985		1986		1987	
	F-VALUE	P-VALUE	F-VALUE	P-VALUE	F-VALUE	P-VALUE
April Test	,0506	,823	7,1850	,009	,4293	,514
June Exam.	2,8616	,095	,1838	,670	,4044	,527
September Test	1,6727	,200	,1898	,664	,6759	,414
November Exam.	1,3372	,251	,0000	,996	,2300	,633

The results of the hypothesis (H_0) using ANCOVA are set out in Table 3.9.

Table 3.9 : Table for Analysis of Covariance : Source of Variation
- PE/NPE students

	D.F.	SUM OF SQ	F-VALUE	P-VALUE
1985 APRIL	1	6320,1083	70,7567	,000
JUNE	1	1073,7939	10,6222	,002
SEPT.	1	1429,8571	9,2176	,003
NOV.	1	249,8879	1,7854	,185
1986 APRIL	1	4850,3647	60,5878	,000
JUNE	1	2329,2398	19,8310	,000
SEPT.	1	1377,1806	10,1828	,002
NOV.	1	771,4981	5,6496	,020
1987 APRIL	1	1403,2003	12,1101	,001
JUNE	1	346,7768	3,3144	,073
SEPT.	1	634,1287	3,5434	,064
NOV.	1	94,3168	,5903	,445

3.4.1.1 The April Test

The hypothesis of no difference in test scores of PE and NPE students is rejected at the 1% level of confidence in all three years. It has already been pointed out (see Table 3.5) that the mean test score of PE students was higher than that of NPE students.

Thus it can be concluded that PE students scored significantly higher on the April test, in all three years, than NPE students.

3.4.1.2 The June Examination

The hypothesis of no difference in examination score is rejected at the 1% level of confidence in 1985 and 1986 and at the 10% level in 1987. Once again a reference to the mean of examination scores of the two groups leads to the conclusion that PE students scored significantly higher than NPE students in the June examination in all three years.

3.4.1.3 The September Test

The hypothesis of no difference in test scores is rejected at the 1% level of confidence in 1985 and 1986 and at the 10% level in 1987. A reference to the mean test scores of the two groups allows the same conclusion as drawn for the June examination to be drawn in the case of the September test.

3.4.1.4 The November Examination

The hypothesis of no difference in examination scores cannot be rejected for 1985 and 1987. In 1986 the null hypothesis cannot be rejected at the 1% level of significance; it can, however, be

rejected at the 5% level. It can be concluded, therefore, that PE and NPE students performed at similar levels in the November examination. Mean examination scores of PE students were higher in all three years (Table 3.6) but the difference in means was insufficient to reject the null hypothesis.

It will be remembered that comparison of ability of PE and NPE students (see 3.3.1) indicated that NPE students may have enjoyed an advantage in ability in 1986. Ability was used as the covariate in this research design and this may have led to the lower level of confidence at which the hypothesis was rejected in 1986.

3.4.1.5 Student Drop-Out

As was the case with Research Design 1, the data used in arriving at the statistics calculated in Table 3.9 included only students who had completed the course and, therefore, written all the tests and examinations. No attempt was made to analyse student drop-out rates beyond that described in Research Design 1. It is likely that had drop-outs been included in the analysis to the extent that they had written tests and examinations, PE student advantage would have been accentuated. (See 3.3.3).

3.4.1.6 Trends

PE students scored significantly higher than NPE students on the April test and this trend continued in June and September. No significant difference in November examination scores was noted.

One of the benefits of the ANCOVA model is that it adjusts the dependent variable for differences between groups on the covariant scores. Table 3.10 shows the means of both groups of students on tests and examinations after allowing for any difference between the groups as to ability.

Table 3.10 : Adjusted Means for the Dependent Variable

		ADJUSTED MEAN			
		1985	1986	1987	AVERAGE
April Test	PE	65,4	68,0	63,7	65,7
	NPE	47,4	50,9	55,0	51,1
	DIFFERENCE	18,0	17,1	8,7	14,6
June Exam.	PE	62,7	61,8	55,6	60,0
	NPE	55,3	50,0	51,3	52,2
	DIFFERENCE	7,4	11,8	4,3	7,8
September Test	PE	63,7	56,4	59,9	60,0
	NPE	55,2	47,3	54,0	52,2
	DIFFERENCE	8,5	9,1	5,9	7,8
November Test	PE	62,8	59,2	54,0	58,7
	NPE	59,3	52,4	51,8	54,5
	DIFFERENCE	3,5	6,8	2,2	4,2

Examination of Table 3.10 shows that PE students outperformed NPE students by the greatest margin in the April Test (average difference 14,6), that their advantage decreased in the June Examination (average difference 7,8) and remained constant in the September Test (average difference 7,8). PE advantage was least in the November Examinations (average difference 4,2). This trend is illustrated in Figure 3.2.

Figure 3.2 : Difference in Average Adjusted Means of NPE and PE Students

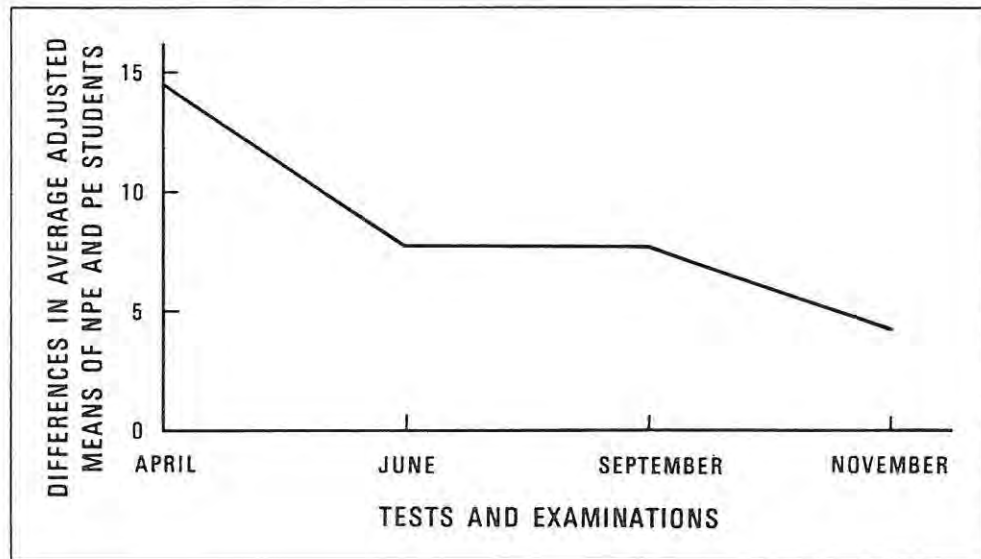


Figure 3.2 is intended to give no more than an indication of the trend in difference in mean adjusted test and examination scores. The significance of this trend is that it bears a very close resemblance to the trend established in Section 3.3.2.5 (Figure 3.1).

3.5 Results of Research Designs 1 and 2 Compared

Research Design 1 used the Mann-Whitney Test and Research Design 2 an Analysis of Covariance, to test whether PE students performed any better than NPE students on examinations and tests over a three year period. The results of the tests were almost identical. Both showed that PE students enjoyed an advantage in the April tests, but the advantage declined in the June examination and September test and that PE students enjoyed no significant advantage in the November examination.

The fact that the results from two different statistical techniques are almost identical enhances the reliability of the findings in that the possibility of chance aberrations in findings using only one technique, are minimised.

3.6 Limitations of this study

3.6.1 This study did not attempt to develop a general model to determine factors which influence student performance in the Accounting I course. Eskew and Faley (17) noted this as a possible shortcoming of other research including that of Baldwin and Bergin. They argued that this may have accounted for findings which conflicted with their finding of PE student advantage in the first college course. The findings of the research described in this chapter show PE student advantage in all but the November examinations. It is believed that the inability of the research designs used, to control for other factors, may at worst, have led to an erroneous finding of no PE student advantage in the November examination.

3.6.2 This study did not differentiate the symbol achieved in the matriculation accounting examination. It may be possible that students with good results in matriculation accounting enjoy an advantage in the university course, while students with poor matriculation accounting results do not.

3.6.3 No attempt was made to establish relative advantage on different types of test and examination questions. For instance, it may be that PE students enjoy an early advantage on test questions requiring accounting techniques and numerical skills, while they may enjoy no advantage on questions dealing with accounting theory.

3.6.4 This study was conducted at Rhodes University using a clearly defined sample of students. The findings of this study, therefore, can only apply to the sample tested.

3.7 Conclusion

Results presented in this chapter show that PE students enjoy considerable advantage in tests early in the year and that this advantage declines but is still present mid-way through the second semester of the Accounting I course. The evidence presented shows that PE student advantage has disappeared by the final examination.

It is not surprising that PE students enjoy an advantage in the early part of the Accounting I course and that this advantage extends through to the September test. It is reasonable to assume that these students have acquired some insights into accounting at high school

while NPE students, on the other hand, are confronted, in the first few months of the Accounting I course, with a completely new discipline which uses language and vocabulary peculiar to it.

The fact that the November examinations reveal no significant difference in achievement between the two groups is, in the researcher's opinion, one of the reasons why it is widely believed, in academic circles and also within the accounting profession, that PE students have no real advantage. Perhaps conclusions are drawn from the final result and there is failure to appreciate the implications of early advantage.

The researcher believes that the failure of PE students to maintain their early advantage throughout the first year can partially be explained by behavioural patterns. PE students find the first months of the course relatively easy because of their school background and because elementary work is covered during this period. The PE student is also encouraged by relatively good results on early tests and examinations. These factors may result in PE students consciously or sub-consciously "coasting". In later stages of the course when new and more rigorous topics are introduced, these students have acquired poor study habits which they may not be able to rectify.

NPE students, on the other hand, are faced with new and demanding work early in the course and have to develop sound study habits early on so as to cope. Relatively poor results in early tests act as a further spur to the acquisition of good study habits. These

good study habits stand the NPE student in good stead later in the course when the more rigorous topics are introduced.

The researcher further believes that PE students would maintain their early advantage throughout the year were it not for behavioural factors affecting both their and NPE students' performance. The findings of the Eskew and Faley study support this contention.

CHAPTER III

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CHAPTER IV

THE STUDENT AND LECTURER SURVEYS : DEVELOPMENT OF THE HYPOTHESES

4.1 Introduction

The problem of this study, identified in Chapter 1, was divided into three sections, the last two involving a survey of opinions regarding the advantage of PE students in the Accounting I course. Opinions of firstly, University accounting students, and secondly, accounting lecturers were surveyed. This chapter identifies and describes the hypotheses which formed the focus of the surveys.

The hypotheses developed out of the question of performance in the first year financial accounting course and a prior study of the subject at high school. The topic is fully discussed in Chapter II of this thesis and most of the research reviewed found that PE students enjoyed an advantage in the first year accounting course, the research described in Chapter III having similar findings. Most previous research has been confined to studying comparative performance of PE and NPE students but some researchers have studied student and lecturer attitudes regarding the question. Findings in the latter studies generally indicated that students and lecturers considered PE students to enjoy a comparative advantage. Despite exhaustive investigation, research of this nature in a South African context, was not found.

4.2 The Student Survey

4.2.1 Hypothesis 1

H_a^1 : The majority of students believe that high school accountancy provides the student with an advantage in the first year university financial accounting course.

Barbour (1) conducted a study in 1955 in the USA which revealed that the majority of accounting students and accounting lecturers surveyed believed high school accounting to be an advantage to those studying accounting at college. Barbour's findings for students were supported by those of Howard (2) in a similar study conducted in 1963, and by Friedlob and Cozenza (3) in 1981. Schroeder (4) found that PE students regarded themselves to be at such an advantage that they recommended high school accounting "be taken as an introduction to the study of accounting" (5). Hutchison and Hart (6) conducted a study in Australia which confirmed the findings of the research in the USA. An investigation of this nature has not been conducted in South Africa.

4.2.2 Hypothesis 2

H_a^2 : The majority of students believe that high school accountancy results in disadvantages for the PE student in the first year university financial accounting course.

This issue has not been addressed in prior research, yet a knowledge of possible PE student disadvantage is required to supplement an understanding of possible PE student advantage.

4.2.3 Hypothesis 3

- H_a^3 : The majority of students believe that PE students would score similar marks to NPE students in each of:
- An April test
 - A mid-year examination
 - A September test
 - A year-end examination.

The question of whether students believe that PE students would be advantaged in tests and examinations is addressed in order to provide additional information regarding the nature of possible PE student advantage or disadvantage.

4.2.4 Hypothesis 4

- H_a^4 : The majority of students believe that PE student advantage continues into the second year university financial accounting course.

This hypothesis is dependent upon the acceptance of H_a^1 . If it is accepted that students believe PE students to have an advantage in the first year course it is necessary to ascertain whether they believe this advantage continues into the second year.

4.2.5 Hypothesis 5

- H_a^5 : The majority of students would, with the benefit of hindsight, choose accountancy as a school subject.

The question of subject choice in the fourth phase of secondary schooling is complex. The differentiated system of education specifically excludes preparation for a career as one of the criteria which should be used in deciding subject choice. Students intending to study at university may benefit, nevertheless, from a knowledge of the opinions of university accounting students regarding the desirability of studying accountancy at school as a preparation for the university course. Hypotheses 5 and 6 are intended to provide some insight into this question.

4.2.6 Hypothesis 6

H_a^6 : The majority of students who indicated that they would, with the benefit of hindsight, have chosen accountancy as a school subject, would do so because of the advantages arising from such prior study, during the first year university course.

4.2.7 Variables

The hypotheses will be tested by determining opinion by:

- (i) whether or not students had studied accountancy at high school (PE or NPE students). This variable was included in all related studies discussed in 4.2.1 above with the exception of that by Schroeder who surveyed PE students only. The intention of using this variable was to ascertain whether PE and NPE students had different opinions regarding the hypotheses.

- (ii) academic status of the student. Students were categorised as either Accounting I students or as belonging to any one of the Accounting II, III or IV classes. The intention of including this variable in the study was to ascertain whether students who had passed Accounting I had opinions different from those currently in the Accounting I class.
- (iii) institution to which the students belonged. The sample (see Chapter V) was drawn from Rhodes University and the University of Natal (Durban). The hypothesis was tested for this variable in case opinions were institution related.

4.3 The Lecturer Survey

Hypotheses 1 to 4 for lecturers are similar to those for students. The prime objective for developing these hypotheses was to gather information for the two groups separately. A secondary objective was to compare the attitudes of lecturers to those of students. It should be noted, however, that selection of the populations for the two groups (see Chapter V) precludes definite conclusions being drawn from the comparison.

4.3.1 Hypothesis 1

H_a^1 : The majority of accounting lecturers believe that PE students have an advantage compared to NPE students in the first year university financial accounting course.

Barbour's study (7) revealed that lecturers believed PE students to be at an advantage. No research of this nature in a South African context was found. Acceptance or otherwise of this hypothesis would

provide a valuable indication of lecturers' opinions and also enable comparison with students' opinions to be made.

4.3.2 Hypothesis 2

H_a^2 : The majority of accounting lecturers believe that PE students have disadvantages compared to NPE students in the first year financial accounting course.

Information about lecturers' opinions regarding possible PE student disadvantage in Accounting I is required to supplement knowledge about opinion regarding PE student advantage.

4.3.3 Hypothesis 3

H_a^3 : The majority of accounting lecturers believe that PE students would score similar marks to NPE students in each of:

- An April test
- A mid-year examination
- A September test
- A year-end examination.

As in the case of the students' questionnaire the question of advantage in tests and examinations is addressed in order to provide additional information regarding the nature of possible PE student advantage or disadvantage.

4.3.4 Hypothesis 4

H_a^4 : The majority of accounting lecturers believe that PE students advantage continues into the second year university financial accounting course.

This hypothesis is dependent upon acceptance of H_a^1 . In the event of lecturers believing PE students to be advantaged in the first year it is necessary to ascertain whether they believe this advantage to continue into the second year.

4.3.5 Hypothesis 5

H_a^5 : The majority of accounting lecturers believe that PE students consider themselves to be advantaged in the first year university financial accounting course.

4.3.6 Hypothesis 6

H_a^6 : The majority of accounting lecturers believe that NPE students consider that PE students have an advantage in the first year university financial accounting course.

Hypotheses 5 and 6 were developed in order to ascertain lecturers' insights into students' opinions. Comparison will be made of students' opinions with lecturers' perceptions of those opinions. It is pointed out that selection of population of the two groups precludes definite conclusions being drawn.

4.3.7 Variables

The hypotheses will be tested by determining opinion by:

- (i) whether or not the lecturer has experience of teaching at Accounting I level. It is likely that a number of respondents will have had no involvement at this level. It may transpire therefore, that these respondents have either a different

opinion from those with Accounting I experience or no opinion at all regarding PE students in the Accounting I course.

- (ii) whether or not the lecturer taught at high school level. It was considered important to ascertain whether the opinions of lecturers with high school teaching experience differed from those of lecturers with tertiary teaching experience only.
- (iii) number of years of academic experience. It was considered necessary to ascertain whether experienced lecturers held different opinions from less experienced lecturers.
- (iv) whether or not the lecturer studied accounting at matriculation level. The personal background of the lecturer regarding accounting as a school subject was considered an important variable in this study. It was considered important to establish whether those lecturers who had studied accounting at school held different opinions from those who had not.
- (v) language orientation of the lecturer's university. In view of the fact that a number of Afrikaans universities have structured their Accounting I courses in a manner which distinguishes between PE and NPE students, it was considered necessary to test opinion by language orientation.

CHAPTER IV

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CHAPTER V

RESEARCH METHODOLOGY : DESIGN OF THE STUDENT AND LECTURER SURVEYS

5.1 Introduction

This chapter describes the research methodology and survey designs used in surveying the opinions of both students and lecturers regarding the advantage of PE students in the accounting course.

5.2 The Population

5.2.1 The Student Population

The student population included all students registered at Rhodes University and the University of Natal (Durban) in 1988, the year that the survey was conducted. The population included only those students registered for one of the Financial Accounting courses (Accounting I to IV). Only full-time students were included in the population because of the possibility of part-time study and concurrent work experience affecting the attitudes of part-time students. All other students falling within the parameters already described were included in the population.

The study did not set out to survey opinions of accounting students at all South African universities but rather confined itself to a survey of opinions of students at Rhodes and Natal (Durban). In Chapter I it was pointed out that a limitation of this study was that the findings would only apply to these two universities and would not necessarily apply to student opinion at other institutions.

No attempt was made to restrict the population further, as was the case in the research described in Chapter 3. There was no intention to use the same populations in the two sections of research.

Rhodes University and Natal University, Durban, were selected to provide the population for a number of reasons:

- The two universities both serve English communities.
- Both universities are accredited by the Public Accountants' and Auditors' Board which enables students from both, who passed the requisite courses, to write the Final Qualifying Examination of the Public Accountants' and Auditors' Board. It can be assumed therefore that the content of the accounting courses and the standards required are similar. This is an important factor because had the two universities offered accounting courses of significantly different content and standard, the attitudes of students to PE student advantage may have been affected.
- Neither of these universities discriminates in any way between PE and NPE students in that the Accounting I courses offered at these institutions make no provision for previous exposure to the subject. The University of Natal (Pietermaritzburg) offers a pre-semester course for NPE students, and therefore would not have been suitable for inclusion in this study because student attitudes may have been affected by the existence of the pre-semester course.
- The researcher believes that the research design is strengthened by including students from two universities in the population because similar findings for students from each university could be indicative of a trend, while dissimilar findings would

indicate that attitudes may be institution related. In this way the nature of the findings would be useful in determining the direction of further research.

5.2.2 The University Lecturers Population

The population of university lecturers included all lecturers in accounting at sixteen selected South African universities in 1988, the year that the survey was conducted. For the purpose of defining the population, lecturers in accounting included all academic staff of departments of accounting who were involved in research or the teaching of one or more of Financial Accounting, Financial Management, Cost Accounting, Auditing, Taxation and any other accounting related course taught under the auspices of a department of Accounting (22).

The survey of accounting lecturers' opinions would, unlike the case of student opinion, provide findings which would be applicable to all accounting lecturers in South Africa. It should be noted, however, that accounting lecturers belong to an extremely heterogenous group in that the interests and areas of expertise vary widely. Thus the question of PE student advantage might be one in which many accounting lecturers show no interest and have no opinion. For example, a lecturer in Auditing who teaches only post-graduate students may have no interest and no opinion regarding PE student advantage in the first year Financial Accounting course. Despite this possibility, all lecturers in accounting were included in the population, but the questionnaire administered to them was designed in such a manner as to make it possible to identify those with little or no interest and no

opinion on the subject of PE student advantage.

5.3 The Sample

Sampling techniques have been developed which, if implemented with care, can be highly accurate. Bailey noted:

Modern sampling theory based upon statistics and probability theory is quite accurate, and when error is present, its extent is generally known. (1)

Bailey (2) identifies a number of advantages which may result from using a sample instead of the entire population. These advantages include :

- Saving in time and cost.
- Timing of the survey. A survey should ideally be conducted at a single point in time so that opinions of respondents are comparable. This may be impossible if the entire population is used without incurring enormous cost and without risking inaccurate responses.
- Response rate. The response rate of a sample may be much better than for the entire population.

Despite identifying possible advantages of sampling, Bailey felt constrained to write :

Ideally we would like to study the entire population or universe, to give more weight to our findings. (3)

Leedy writing in similar vein about sample size, stated :

One basic rule is: The larger the sample the better.
(4)

In view of the above statements by Leedy and Bailey and because it was feasible, it was decided to use the entire population, both in the case of the accounting students at the two universities and the accounting lecturers.

5.3.1 The Student Sample

The population of students consisted of approximately 1 200 students from Rhodes and Natal (Durban). This population was considered large enough to warrant consideration of using sampling techniques. The use of a sample, however, would only be justified if use of the entire population was not feasible nor practical.

A disadvantage of using the entire population as the sample was that of cost, but the additional cost was considered to be negligible. Additional costs were incurred because printing costs rose in direct proportion to the increase in sample size. The advantages, identified by Bailey, of using a sample were not present in this survey :

- Saving in time: The survey which was conducted by questionnaire was administered through tutorial groups (see section 5.4.1) and, therefore, the time needed for administration of the questionnaire was the same irrespective of the number of tutorial groups included.

Additional time was required for inputting the data into the computer but the extra time was not considered to be so long as to preclude the use of the entire population.

- Timing of survey: The nature of the attitudes being surveyed was such that they were most unlikely to change due to the passage of a few weeks of time, therefore, the timing of the survey was not of critical importance. Nevertheless the survey could be conducted over the period of a single week and this length of time would not have been reduced had the sample size been reduced. The reason for this was that administration of the questionnaire was through tutorial groups during tutorial meetings. The number of tutorial groups included in the study during any tutorial period could vary without requiring additional time.
- Response rate: The response rate could be closely monitored and controlled by those administering the survey. It was envisaged that because of this factor a high response rate could be expected.

In view of the above it was decided to survey the entire population and therefore avoid the possible drawbacks of even the best of sampling designs.

5.3.2 The University Lecturers Sample

The population of university lecturers consisted of approximately two hundred lecturers. The use of sampling techniques to establish a sample representative of the population was considered to be highly problematic. This was because of the heterogenous nature of the population. For example it was likely that only a small number of

accounting lecturers would have a direct interest and an objective knowledge of, PE student advantage and, indeed, of the Accounting I course, and these individuals would not be easily identifiable. No certainty existed as to the constitution of the population regarding knowledge of and interest in PE student advantage and therefore, identification of a representative sample would have been impossible.

In addition to the factors mentioned above, the population was considered to be small enough to survey in its entirety, without foregoing any of the advantages, identified by Bailey, of using a sample.

- Saving in time: The survey which was conducted by questionnaire and administered by heads of department (See Section 5.4.1), had to include all universities in order to be representative. Had a sampling technique been used, the number of respondents from each university would not have been significantly fewer than the total number of accounting lecturers at the particular university because of the comparative small number of accounting lecturers at each institution.
- Timing of survey: As was the case with the survey of student opinions, accounting lecturers' attitudes were unlikely to change in the short term. Thus the timing of the survey was not of great importance. In addition, similar timing problems would have been experienced whether a sample or the entire population was selected for survey. It was considered that the survey could be conducted over a period of approximately one month and that the passage of this amount of time would have no bearing upon attitudes.

- Response rate: The co-operation of heads of department was obtained in that they all undertook to administer the questionnaires to members of their departments. It was considered that this would ensure an optimal response rate which would not have been improved upon had a smaller sample been used.

It was decided, therefore, to survey the entire population. Sixteen universities including all the "participating universities" (5) were included in the sample. The remaining universities were not included because of difficulties experienced in making contact with heads of departments.

Table 5.1 : Population of Students (6)

	RHODES	NATAL	TOTAL
Accounting I	237	560	797
II	128	240	368
III	85	92	177
IV	38*	70	108
Total	488	962	1 450

* includes 8 students who had obtained credit in Accounting III but were not registered for Accounting IV.

Table 5.2 : Population of Accounting Lecturers (7)

<u>UNIVERSITY</u>	<u>LECTURERS</u>
Rhodes University	9
University of Natal (Durban)	20
University of Natal (Pmbg)	9
University of Durban-Westville	10
University of Zululand	7
University of Witwatersrand	20
Rand Afrikaans University	12
Pretoria University	26
Potchefstroom University	9
University of the Orange Free State	5
Transkei University	11
University of Fort Hare	4
Stellenbosch University	19
University of South Africa	50
University of Cape Town	30
University of Port Elizabeth	10
TOTAL	<u>251</u> ===

5.4 Development of the Questionnaires : General Considerations

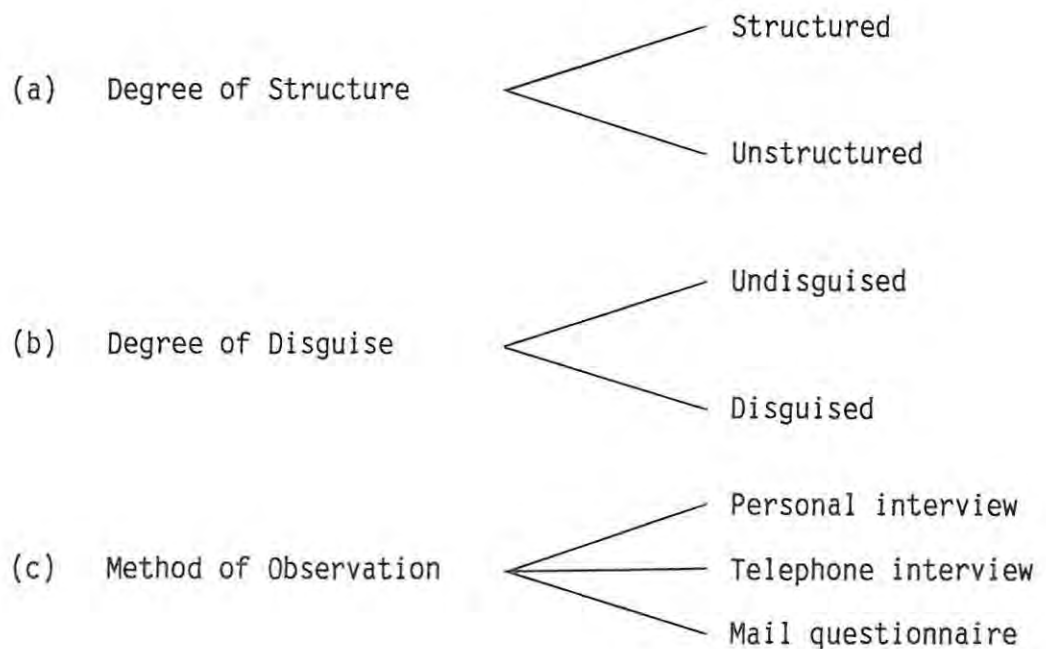
5.4.1 Collection of data

5.4.1.1 Method of Data Collection

In a descriptive survey of the nature of those conducted and described in this thesis, data can be collected either by direct observation or by personal communication with the respondent. In the case of both the students and lecturers whose opinions were being surveyed, it was not possible to gather the data by observation and therefore personal communication between researcher and respondent was necessary.

Churchill (8) indicates that once personal communication has been selected as the method of data collection, a number of supplementary decisions have to be made. These supplementary decisions are illustrated in Figure 5.1.

Figure 5.1 : Communication as the method of data collection :
Supplementary Decisions



(a) Degree of Structure

Structure refers to the degree of standardisation imposed upon the questionnaire. A highly structured questionnaire is one in which both the questions and range of responses are completely pre-determined.

It was decided that both the students and lecturers' questionnaire would be highly structured. The questionnaires were structured in a manner which gave respondents a number of fixed alternatives from which to select.

The only exceptions to the fixed alternative questions were two open ended questions in the lecturers' questionnaire referring to age and name of university and three open ended questions in the students' questionnaire referring to age and date of matriculation and of enrolment at university. These open ended questions formed a very small part of the questionnaires, consequently the questionnaires are described as highly structured.

While most questions were highly structured, respondents were given the opportunity of giving additional information or modifying an opinion in some questions. This was done by providing a "comments" or "reasons" section which a respondent could elect to use in addition to selecting one of the fixed alternatives.

(b) Degree of Disguise

Disguise refers to the extent to which the objectives of the

survey are obvious from the questions asked. Disguise may be necessary where the researcher fears biased answers because respondents may be influenced by opinions they hold on the overall topic.

In the case of the questionnaires used in this research it was considered important that respondents were aware of the topic being researched. It was made clear in the covering letter written to each respondent, precisely what was being researched. This was done because it was considered important that respondents were aware of the topic before answering any specific questions. In this way it was believed that considered opinions would be forthcoming. The questionnaires were, therefore, totally undisguised.

(c) Method of Administration

Questionnaires can be administered by mail, personal interview and telephone interview. It was considered that both the telephone and personal interview methods would be inappropriate for the student and lecturer surveys, because of the large number of respondents involved and also because the researcher believed there to be benefits from allowing respondents to answer the questionnaire in their own time and at their own pace.

Student Questionnaire : The questionnaire was administered to students during a tutorial period. The tutor in charge of each group of students (tutorial group) was instructed to ensure that all students completed the questionnaire and that no discussion took place

while the questionnaire was being completed. The researcher and a research assistant (9) met with tutors at Rhodes University, prior to the tutorial periods and explained how the questionnaires were to be administered. Completed questionnaires were returned by tutors at the conclusion of the tutorial meeting.

The questionnaires were administered in the same way at Natal University, the researcher travelling to Durban to ensure that the same procedures were used. The Head of the Department of Accountancy in Durban met with tutors and ensured that procedures were properly followed.

Accounting Lecturers' Questionnaire: Telephone contact was made with heads of departments of accounting of universities included in the sample. Every one agreed to administer the questionnaire to members of their respective departments. The questionnaires for each university were posted to the head of department with a covering letter and a postage paid reply envelope. Heads of department were to distribute questionnaires to members of their staff, collect completed questionnaires and return them to the researcher in the reply envelopes. It was hoped that by using this method the rate of response would be maximised.

It can be seen from the above that a derivation of a mail questionnaire was used for both groups, in that the questionnaire was delivered to the respondent who completed it without being face to face with the distributor. Erdos (10) stated that mail

questionnaires afford the researcher little control in securing a response from the respondent, arguing that the researcher can simply direct the questionnaire to the respondent and provide an incentive for co-operation. In the case of the student questionnaires this incentive for co-operation was an appeal, in a letter attached to the questionnaire, for co-operation and an indication of the importance of the study for curriculum development. It was hoped that further encouragement provided by the tutor and the implied official sanction of the university, would ensure a high response rate.

The accounting lecturers also received an appeal for co-operation and an explanation of the research in a letter attached to the questionnaire. It was hoped that this would prove sufficient to awaken a sense of academic responsibility and fraternalism which would lead to a high response rate. It was hoped that further incentive for completing the questionnaire would be provided by the head of department responsible for collection of completed questionnaires.

A problem with mail questionnaires is a danger of sequence bias. Respondents are able to peruse the entire questionnaire and so responses may be influenced by responses to related questions. In the case of both questionnaires used in this study, the fact that respondents could read through the entire questionnaire before deciding upon answers, was regarded as an advantage. The success of the surveys was dependent on the quality of thought applied in answering questions.

Generally a mail questionnaire affords no opportunity for clarification where a respondent fails to understand a question fully. The questionnaires used in this research did not include any difficult questions and it was believed that university students and lecturers would not experience difficulty with the standard of language used. It was hoped that, in the unlikely event of difficulty with a question being experienced, the respondent would make use of the "comments" section to clarify his or her interpretation of the question and answer.

A mail questionnaire affords respondents the opportunity to be more frank on issues which they may consider to be sensitive. While it was considered that none of the issues broached in the questionnaires was sensitive, allowance had to be made for contrary opinions. The student respondents were not asked to identify themselves and the questionnaire therefore, remained completely anonymous. The accounting lecturers were given the opportunity to provide their names, but it was made very clear that this was entirely optional. In addition the accounting lecturers were asked for their names only at the end of the questionnaire, thereby enabling the respondent to make the decision as to anonymity only after having considered the questionnaire in its entirety. The fact that student respondents were anonymous and that lecturer respondents had the option to remain anonymous, was considered to be an advantage of using the mail type questionnaire.

A further advantage of using the mail type questionnaire was that respondents, particularly lecturers and to a lesser extent students, were given the opportunity to work at their own pace. It was believed that this would provide better quality responses.

5.4.1.2 Description of Questionnaires

Both questionnaires can, in the light of the preceding discussion, be described as structured undisguised questionnaires. Undisguised questions for which the responses were limited to stated alternatives, were used. In deciding to use this type of questionnaire the advantages and disadvantages of structure and lack of disguise, were considered. A discussion of these follows :

(i) Simplicity

This type of questionnaire is simple to administer and easy to analyse. Respondents should have little difficulty in answering questions because responses need not be converted into the written word but rather chosen from the stated alternatives. This does not imply that no, or little thought is necessary, but rather that the range of alternatives is specific and adequate.

(ii) Reliability

- Assuming that the respondent's opinion has not changed, the response to any questions should be reliable in that if asked the question again, the response would be the same.
- Reliability is increased because the frame of reference is obvious from the stated alternatives. By providing the

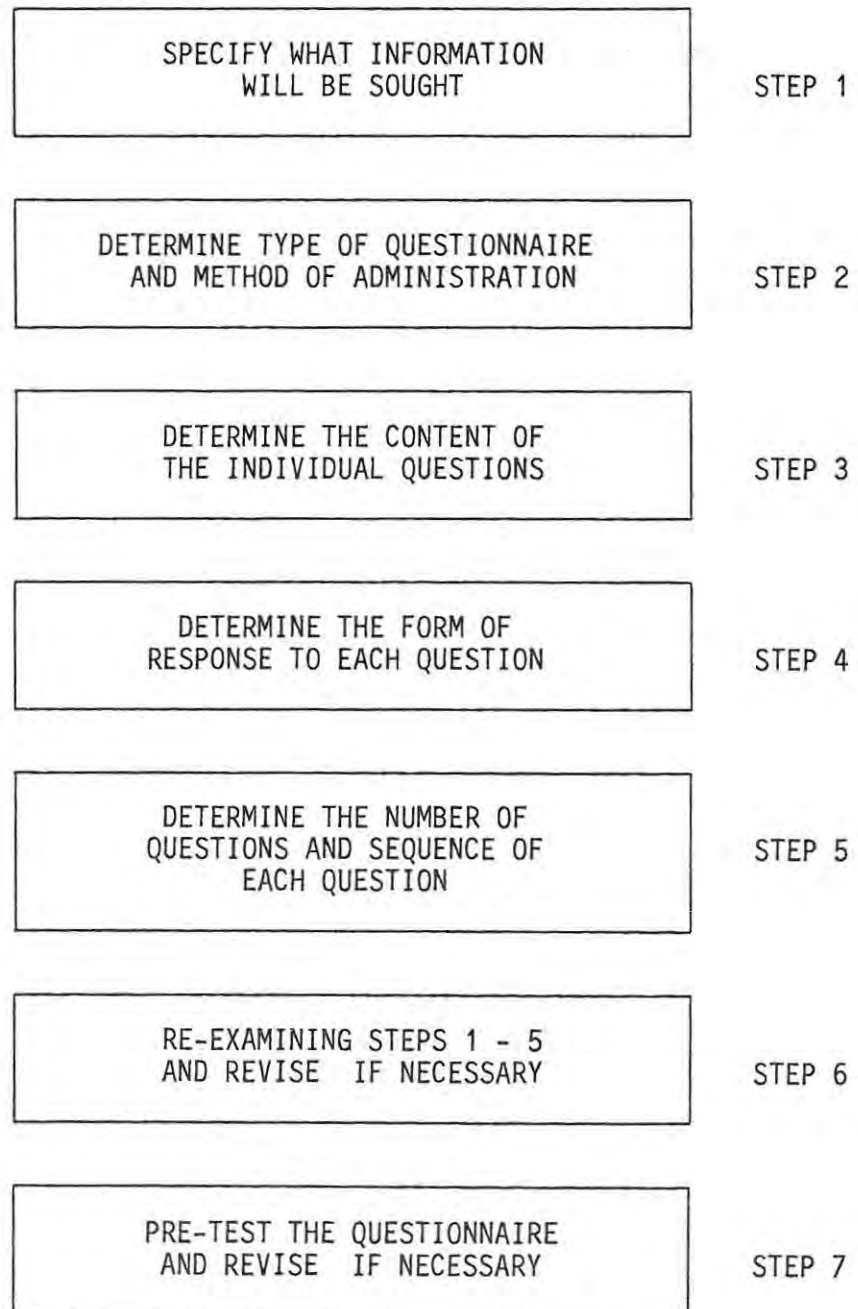
respondent with a range of replies from which to choose, the question itself may become clearer to the respondent. Interpretation would be impossible if each respondent was to answer the question using his or her own wording.

- The reliability of fixed alternative questions is sometimes associated with loss of validity because answers may not reflect the respondent's opinion. Furthermore fixed alternatives may persuade a respondent to respond where he or she does not have an opinion at all. These potential disadvantages were partially overcome by providing a "comments" section to selected questions which would allow respondents to state an opinion not offered by the fixed alternatives. Some questions, in addition to the "comments" section, provided "no opinion" as one of the fixed alternatives.
- Stated alternative responses may also lower validity where the response categories themselves introduce bias. This would be particularly marked where an appropriate response is omitted. Care was taken to ensure that the full range of possible responses was provided, but once again the "comments" section of each question provided a vehicle for a response which may have been omitted. The researcher found that no respondents, neither students nor lecturers, felt constrained to use the "comments" section rather than one of the fixed alternatives, and must conclude, therefore, that the stated alternatives were adequate.

5.5 Development of the Questionnaire : Practical Considerations

The procedure used for developing the questionnaire was that used by Jackson (11) and is illustrated in Figure 5.2.

FIGURE 5.2 : An outline of the procedure which was followed in developing the questionnaire



5.5.1 Step 1 : Specification of Information Sought

The information sought was divided into two parts for both the student and lecturers' questionnaires.

5.5.1.1 Section A : This section contained questions concerning biographical and other details of each respondent.

These questions were designed to obtain personal details of each respondent. The intention of establishing these details was to test for correlations with attitudes and opinions. For example :

- students were asked whether they studied accounting at high school, whether they entered university directly from school, for details of academic achievement, their age and sex.
- lecturers were asked their age, sex, position held, whether they had ever taught Accounting I.

5.5.1.2 Section B : This section contained questions regarding the respondent's opinions in respect of high school accounting and the university Accounting I course.

These questions were designed to ascertain respondents' opinions regarding various aspects of the problems associated with having both PE and NPE students admitted to the same Accounting I course.

For example:

- Students and lecturers were asked whether they considered PE students to have an advantage in Accounting I, their opinions regarding various curriculum designs for Accounting I and their opinions regarding possible strategies which high schools and universities could adopt.

- Lecturers were asked questions designed to ascertain their level of knowledge of the school accounting course.

5.5.2 Step 2 : Determination of Type of Questionnaire and Method of Administration

This step was dealt with in the section dealing with data collection where it was shown that the questionnaire could be described as structured/undisguised and the method of distribution as an adaptation of the mail questionnaire.

5.5.2.1 The Student Questionnaire : The student questionnaire was presented in four different forms.

- (i) For students currently doing Accounting I and who did not take accounting at high school.
- (ii) For students currently doing Accounting I who took accounting at high school. This questionnaire differed in the following manner from that identified in (i) above :
 - it contained extra questions regarding the grade and level of pass in matriculation accounting
 - the wording of three questions in Section B was altered slightly so as to take into account that the respondents were PE students. The meaning of the questions was unaltered.

For example :

NPE students were asked : Why didn't you choose Accounting as a school subject?

PE students were asked : Why did you choose accounting as a school subject?

(iii) For students currently doing one of Accounting II, III or IV who did not take accounting at high school. This questionnaire differed in the following manner from that identified in (i) above.

- It contained questions regarding success in accounting courses taken at university
- The wording of three questions in Section B was altered so as to require students to give opinions within the context of their own experience in Accounting I. This was done by prefacing the questions with:

"Think back to when you were doing Accounting I."

(iv) For students currently doing one of Accounting II, III or IV who took accounting at high school. This questionnaire differed from that described in (iii) above in the same way that the questionnaire described in (ii) differed from that described in (i).

The four different student questionnaires were printed in different colours to avoid confusion. In addition, each questionnaire had a cover page which described the category of student for which the questionnaire was intended. This description was printed using enlarged graphics so as further to minimise the possibility of confusion. This strategy proved to be highly successful with not a single student respondent using an incorrect questionnaire.

5.5.2.2 The Lecturers' Questionnaire

This questionnaire was presented in a single form for completion by all accounting lecturers. One of the propositions discussed in Chapter 4, was a comparison of student and lecturers' opinions on certain aspects of high school accounting as a preparation for university study of the subject. In order for the comparison of opinions to be valid, students and lecturers were asked exactly the same questions. Thus in Section B of both the student and lecturers' questionnaires, seven questions relating to the same issues were posed.

5.5.3 Step 3 : Determine the Content of the Individual Questions

The content of individual questions depended upon a number of decisions already taken and discussed earlier. The information sought, the degree of disguise, the structure and the method of administration all influenced the content of individual questions. Kornhauser and Sheatsley (12) recommended that additional aspects be considered. These were:

- (i) Is the question posed necessary?
- (ii) Are several questions needed instead of one?
- (iii) Do respondents have the necessary information?
- (iv) Will respondents provide the information?

Is the question posed necessary?

Questions should be posed which seek information on issues already identified as being important. Questions should be worded in such a way as to elicit answers giving the required detail, no more and no

less. Additional questions should only be posed if existing questions do not elicit sufficient information. The role of the hypothesis and sub-problems in determining the content of the questions is of vital importance.

Are several questions needed instead of one?

Where possible the number of questions posed should be minimised, but in some cases it is not possible to cover the issue under review in a single question. For example the question "Do PE students have any advantages compared to NPE students?" may receive the answer "No" from a respondent. If this question is supplemented by the following question, "Would PE students perform better than NPE students in the mid-year examination?" a more meaningful picture may arise as respondents may consider PE students to have no advantage but may think that they would perform better than NPE students on certain tests and examinations. In this way it is possible to cover all aspects of an issue which may not be possible by using a single question.

Do Respondents have the necessary information?

Before questions are posed the researcher must be confident that the respondents have the information necessary to answer the questions. The researcher should also be satisfied that answers to questions will be reliable and that respondents will not have to expend an unreasonable amount of time and effort in answering questions. Churchill (13) suggested that the researcher asks the following in respect of each question considered for inclusion in the

questionnaire:

- Does the question call for answers the respondent cannot give or cannot give accurately?
- Is the issue within the respondent's experience?
- Would the respondent have to do a great deal of work to answer the question?
- Does the question ask for opinions on matters so unfamiliar to the respondent that the answer does not mean what it seems to?
- Is the respondent to whom the enquiry will be directed, the best source of information or should this specific data be secured from someone else?
- Can the respondents be expected to remember the information?

The questions posed by Churchill formed part of the frame of reference used when constructing the questionnaires. Each of Churchill's questions are discussed hereunder:

- (i) Both lecturers and students should have had no difficulty answering the questions contained in Section A of the respective questionnaires. Lecturers should have been able to give accurate answers within the framework required by the fixed alternative answer format of Section B. Where any doubt existed as to lecturers' ability to select a fixed alternative opinion, the respondent was given the opportunity to choose "no opinion", thus ensuring that a fixed alternative could be used.

PE students should have been able to give accurate answers within the fixed alternative format of Section B, by virtue of their previous exposure to Accounting. NPE students, on the other hand, may not have been able to give accurate answers because they may not have had contact with PE students and therefore have had no knowledge of the topic. Question 1 of Section B sought to establish respondents' opinions regarding the proportion of PE students in the Accounting class. The question was intended to establish whether NPE students were aware of a significant PE student constituency. It was felt that if NPE students thought a significant proportion of the class were PE students they would have come into contact with PE students and therefore have some knowledge of the topic. It transpired that the vast majority of NPE students believed there to be a significant proportion of PE students in the class.

- (ii) In the case of lecturers the issues may not have been within their experience. The questionnaire was designed to establish this fact and also designed so that questions could be answered by respondents with no experience of the issues. This was done by including "no opinion" as one of the fixed alternative responses where appropriate.

In the case of PE students the issues fell within their range of experience. This was also true of NPE students, except for two questions relating to high school accounting. These questions did not fall within their range of experience because they had not studied accounting at school but the intention of

posing the question was to ascertain whether they held opinions despite having had no direct experience relating to the issue.

- (iii) The questionnaires were designed to require approximately twenty minutes of a lecturer's time and fifteen minutes of a student's time. Questions were such that an immediate response should have been possible without a great deal of work being necessary. Section A contained routine questions while Section B sought opinions but did not test knowledge.
- (iv) In view of the factors discussed in (i) and (ii) above it can safely be assumed that none of the matters on which questions were posed were unfamiliar to respondents, with the exception of those identified in (ii) for NPE students.
- (v) Both the lecturer and student respondents were not only the best source of information but were the only source from which the information required could be gleaned.
- (vi) The information required was, in the case of Section B of both questionnaires, in the form of opinions. There is no question that respondents would be able to recall the opinions they hold on the issues under review.

In view of the above analysis it is contended that both categories of respondent had the ability to complete the respective questionnaires in a meaningful manner.

Will respondents provide the information?

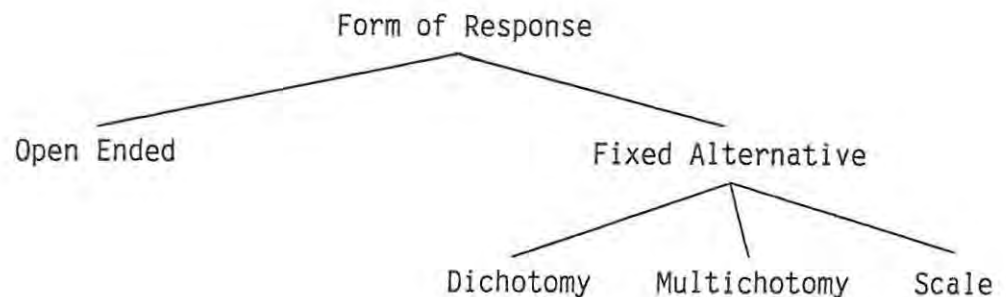
Where an issue under survey is of a sensitive nature respondents may not be prepared to divulge information or opinions. Various methods exist whereby respondents can be deceived into answering questions on sensitive issues by clever questionnaire design. This play played no part in the design of the questionnaires used in these surveys. Issues were not considered to be sensitive but in the event of a respondent thinking otherwise, questionnaires provided anonymity which, it was believed, would overcome any reticence in answering questions of a sensitive nature.

5.5.4 Step 4 : The determination of the form of response to each question

The fixed alternative response format which was predominantly used in both questionnaires required that a decision be taken regarding the form of fixed alternative response suitable for individual questions. The possibilities which arise are illustrated in Figure 5.3.

The questionnaires also contained a small number of open-ended questions.

Figure 5.3 : Forms of Response to a Question



(i) Dichotomous Questions

This is a fixed alternative question for which only two alternatives are offered.

(ii) Multichotomous Questions

This is a fixed alternative question for which a number of alternatives are available and from which the respondent is asked to choose the alternative that most closely corresponds with his opinion on the subject. This type of multiple choice question does not usually permit the respondent to elaborate on his position.

A derivation of this type of question is one which allows the respondent to choose more than one of the fixed answers. Bailey refers to this type of question as an "inventory". (14)

Section A of both questionnaires contained dichotomous, multichotomous and open-ended questions as only factual descriptive information was required. The information sought in this section included biographical details of respondents, and details of school and university academic records.

Section B of both questionnaires contained dichotomous, multichotomous and "inventory" questions. Information sought in this section related mainly to attitudes and opinions.

(iii) Scales

This method of obtaining a response uses a scale from which the respondent chooses the answer which best suits his opinion. The question is therefore multichotomous within the framework of a scale.

McGowan writes :

In attitude research, measurement of the attitudes held is generally obtained in a relatively direct fashion through the use of some type of attitudinal scale. In this method a fairly direct question is given and respondents reflect the strength and direction of their attitude by their responses, as measured on carefully designed scales. (15)

Two methods of scaling were considered for certain of the fixed alternative response questions used in the questionnaires. These methods were "The Semantic Differential Scale" and the "Likert Attitudinal Scale".

Semantic Differential Scale

This scale was developed at the University of Illinois by Osgood, Suci and Tannenbaum (16) and was originally designed to investigate the underlying structure of words but has been adapted to measure attitudes.

Bipolar adjectives or bipolar phrases are selected to "open" and "close" the scale. The adjectives and phrases are used to test an opinion or attitude of the respondent. Semantic differential scales usually consist of a range of seven responses. These responses are coded generally on a numerical basis. A broad framework exists in the form of the bipolar adjectives or phrases and the respondent is required to select the number on the scale which best indicates his opinion.

This method of scaling was only used in the lecturers' questionnaire and only for questions 10 and 12 of Section B. The method was considered to be generally unsuitable for the type of respondents envisaged as it should only be used where direct questioning is considered to be invalid. Osgood et al argued that "highly intelligent and verbally fluent" (17) respondents should be questioned directly while

less fluent subjects ... find it difficult to encode meanings ... yet given a form of the semantic differential... quickly and confidently indicated ... judgements. (17)

The range of responses used was reduced to five as within the context of the two questions posed no additional information would have been forthcoming from a seven point scale.

Question 12 from the lecturers' questionnaire illustrates the use of this scaling method.

What knowledge do you have of the school accounting syllabus? Please circle the appropriate number.

NO KNOWLEDGE

EXTENSIVE KNOWLEDGE

0

1

2

3

4

5

Likert Scale

This scaling method allows the respondent to express the intensity of feeling held about the issue under review. In its purest form the scale allows the respondent to agree or disagree with a proposition, with various levels of intensity.

A Likert-type scale was considered to be suitable for two questions in the student questionnaire. These questions related to opinions regarding various forms of Accounting I course structure and to possible strategies which schools and universities could adopt. The Likert scale was not used in its pure form as respondents were not asked to agree or disagree, but rather to indicate whether an option was detrimental or beneficial.

The following example, taken from Question 5 of the student questionnaire, illustrates the adapted form of the scale.

A PRE-SEMESTER COURSE FOR STUDENTS WHO HAVE NOT DONE ACCOUNTING AT SCHOOL WHICH WOULD ENABLE THEM TO 'CATCH UP' TO THOSE STUDENTS WHO HAVE DONE ACCOUNTING AT SCHOOL	HIGHLY DETRIMENTAL	1
	DETRIMENTAL	2
	NEUTRAL	3
	BENEFICIAL	4
	HIGHLY BENEFICIAL	5

The questions using the Likert-type scale in the student questionnaire were also posed in the lecturers' questionnaire except that one of the questions was further adapted to allow respondents the option of selecting "no opinion". (Question 7).

A Likert-type rating scale was used because it was considered to be superior, in the above instances, to the semantic differential scale for a number of reasons. Firstly, suitable bipolar adjectives and phrases could not be found to suit the particular issues being tested. Secondly, the issues being tested required highly structured fixed alternatives and it was

considered that the use of this scale would enable respondents easily to select an answer corresponding with their opinion.

5.5.5 Step 5 : Determination of the number of Questions and the Sequence of Questions

In determining the number of questions in the questionnaire the primary consideration was that all issues be covered adequately. Fortunately neither the students nor the lecturers' questionnaires required a large number of questions. The number of questions included in the student questionnaire varied according to the category of student with the maximum number being twenty-three. The lecturers' questionnaire contained twenty-six questions. It was estimated that the time necessary for completion of the questionnaires would be approximately fifteen minutes for the students and twenty minutes for the lecturers, as previously indicated.

Both questionnaires contained questions seeking two types of information. These "categories" of information Churchill (18) called basic information and classification information. Basic information refers to the subject of the study, in this case opinions regarding various aspects of the prior study of accounting. Classification information refers to data which is used to classify respondents. Churchill suggested that questions seeking basic information should precede those requiring classification information.

The sequence suggested by Churchill was followed in both questionnaires with Section A containing questions seeking basic information and Section B classification information.

5.5.6 Step 6 : Re-examination of Steps 1 - 5

Steps 1 - 5 were thoroughly re-examined. Re-examination was conducted to ensure that questions were not confusing or ambiguous, offensive to the respondent, leading or bias inducing. Re-examination also included the sequence of questions and the suitability of the response categories selected for each question.

5.5.7 Pre-testing and Revision of the Questionnaire

Every researcher should give the questionnaire to at least half a dozen friends, or neighbors, to test whether there are any items that they may have difficulty in understanding or in comprehending ...
(19)

The final stage in the questionnaire construction was to perform a pre-test or pilot study. This was carried out for both questionnaires. The purpose was to identify flaws or omissions in the questionnaire and to ascertain whether it was understandable and easy to answer.

5.5.7.1 The Student Questionnaire : The pre-test sample was selected from accounting students at Rhodes University. Two tutorial groups were selected from each of the Accounting I, II, III and IV classes. The purpose of the research and of the pilot study was explained to students and they were asked, in addition to completing the questionnaire, to be critically aware of all aspects of the questionnaire such as wording, question order, ambiguity, response formats and any other aspects which they identified while completing the questionnaire.

It was considered that students taking part in the pilot study were representative of the population of Rhodes students. The sample drawn used random quota sampling in that students from all four years of study were selected and tutorial groups were randomly chosen. The number of respondents was a judgmental decision made by the researcher.

In analysing the pre-test data attention was paid to respondents' comments and suggestions as well as to the responses to questions. Responses were checked to ensure that they were appropriate to the questions being asked. Questions which seemed to antagonise or which elicited adverse reaction were re-examined and either modified or removed. Questions also were added as a result of comments made. Changes made to the original questionnaire are set out in Appendix 5.

Students participating in the pilot study were timed while completing the questionnaire to ensure that the time estimated for completion of the questionnaire was reasonably accurate. The average time needed by students was fourteen minutes which was considered to be within the limit identified for optimal completion of the questionnaire.

In addition to the pilot study conducted at Rhodes the questionnaire was checked by the Head of Department of Accountancy at Natal University, Durban. This was done to ensure that terminology and questions would be understood by Durban students. Minor changes resulted from this measure and are described in Appendix 5.

5.5.7.2 The Lecturers' Questionnaire : The lecturers' questionnaire was prepared after the students' questionnaire had been administered and the completed questionnaires returned. It was possible, therefore, to use the experience gained in preparing the student questionnaire when constructing the lecturers' questionnaire because some questions were identical and some very similar. The lecturers' questionnaire was pre-tested, the pre-test sample consisting of three lecturers from the East London Division of Rhodes University. These lecturers lecture in Financial Accounting, Auditing, Taxation and Cost & Management Accounting to classes from first to third year, thus providing a range of interests and teaching experience. The respondents were selected on a purely convenience basis, the number being a judgmental decision.

The pilot sample was not necessarily representative of the population but this was not seen as a problem as the pilot sample was only used to test the questionnaire before final drafting. The respondents were requested to complete the questionnaire and note any flaws or omissions and make any other suggestions which they considered appropriate. They were also asked to note the time taken for completion of the questionnaire.

All three respondents reported no difficulty in understanding questions nor in selecting appropriate fixed alternative answers. None had any comments or criticisms of the questionnaire even when pressed to identify minor problems and insignificant comments. The

average time taken for completion of the questionnaire was seventeen minutes which was within the limit identified for optimal completion of the questionnaire.

The questionnaire was checked again by two senior colleagues of the researcher in Grahamstown. They were not included in the original pilot sample because they had some knowledge of the research project and therefore could not be regarded as unbiased respondents.

The pilot study resulted in no changes being made to the questionnaire administered to the pilot sample.

5.6 Translation

The student questionnaire did not require translation because it was assumed that students from both Rhodes and Natal (Durban), English speaking universities, would understand English.

The lecturers' questionnaire was translated into Afrikaans as both English and Afrikaans speaking lecturers were included in the sample to be surveyed. The translation was carried out by a bilingual Professor of Accounting at Rhodes University. As an additional safeguard the translation was checked by a retired Afrikaans teacher living in Grahamstown.

5.7 Coding

Numerical coding of questionnaires is desirable for computer analysis

of results. Coding consists of assigning a code number to each answer category. It was decided to use coding for both the students and lecturers' questionnaires in view of the number of likely respondents and also because it was the intention to analyse the questionnaire by computer.

Numerical coding can be conducted either when the questionnaire is being written (pre-coding) or after the questionnaire has been administered and the questions answered (post-coding). (20)

Pre-coding can only be carried out where the answer categories are known in advance. In view of the fact that both questionnaires were highly structured, consisting mainly of closed-ended questions, pre-coding was considered to be appropriate. The questionnaires were pre-coded which necessitated a minor adjustment to the format of one question in the student questionnaire in order to make pre-coding possible.

The pre-coding was checked by a lecturer in the Department of Mathematical Statistics at Rhodes University (21).

5.8 Results

The information from the questionnaire was processed by computer using the BMDP Statistical Programme.

5.9. Additional Questions

Questions not relating to the hypothesis tested in these studies were included in the questionnaire with a view to gathering data for further research.

5.10 Conclusion

In the opinion of the researcher the methodology described in this chapter and used in the study was sufficiently sound to give meaningful results.

CHAPTER V

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21. Mrs S. Radloff, Lecturer in Mathematical Statistics, Rhodes University, Grahamstown.
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e.g. Natal University (Durban) : Department of Accountancy.

CHAPTER VI

SURVEY OF STUDENT OPINION : RESEARCH FINDINGS

6.1 The Respondents

Responses to the questionnaire were received from 1 127 respondents. It will be seen from Table 6.1 that this represented a 77,7% response rate overall. The response rate of Natal students was 72,2% and that of Rhodes students 88,5%.

Table 6.1 : The Student Survey : Population and Respondents

	Number of Students	Number of Respondents	Response Rate (%)
Natal - Accounting IV	70	61	87.1
- Accounting III	92	60	65.2
- Accounting II	240	141	58.8
- Accounting I	560	433	77.3
Sub Total	962	695	72.2
Rhodes - Accounting IV	38	38	100.0
- Accounting III	85	76	89.4
- Accounting II	128	119	93.0
- Accounting I	237	199	84.0
Sub Total	488	432	88.5
TOTAL	1 450	1 127	77.7

The rate of response of all categories of the population was considered adequate especially when it is borne in mind that the entire population of students was included in the sample.

Table 6.2 contains an analysis of the respondents in terms of the variables, identified in Chapter 4, by which the hypotheses were tested.

Table 6.2 : Analysis of Respondents by University, High School Background in Accounting and Academic Status

	NATAL			RHODES			TOTAL
	ACCI	ACCO	TOTAL	ACCI	ACCO	TOTAL	
NPE	231	87	318	100	115	215	533
PE	202	175	377	99	118	217	594
	433	262	695	199	233	432	1127

ACCI = Accounting I students

ACCO = Other Accounting students (II, III, IV)

(These abbreviations will be used hereafter).

Natal respondents represented 61,7% of the total (695 respondents). The proportions of PE and NPE students in the total of respondents was 52,7% and 47,3% respectively with the numbers at Rhodes being almost identical. There were considerably more PE than NPE students in the Accounting II - IV group in Natal. 62,3% of Natal and 46,1% of Rhodes respondents were first year students. The higher proportion

of first year students at Natal can be ascribed, firstly, to the fact that Accounting I need not be taken beyond the first year in some of the B.Com. curricula and secondly, the subject is included in the curricula of several faculties.

6.2 Perceptions regarding composition of the First Year Class

It was established that the vast majority of respondents believed the first year accounting class to contain significant proportions of both PE and NPE students. Question 1 from Section B of the questionnaire was designed to ascertain the opinion of respondents in this regard. The analysis of responses to Question 1 are set out in Table 6.3.

Table 6.3 : Opinions Regarding Composition of Accounting I Class

		% of PE students in Accounting I					Total
		100%	75%	50%	25%	0%	
Natal	NPE	8	112	155	34	3	312
	PE	15	129	191	35	5	375
		23	241	346	69	8	687
=====							
Rhodes	NPE	1	48	138	27	1	215
	PE	1	63	124	26	3	217
		2	111	262	53	4	432
=====							

Table 6.3 reveals that 37 students believed there to be an insignificant proportion of either PE or NPE students in the first year accounting class. 4,5% (31 respondents) of the Natal respondents and 1,4% (6 respondents) of Rhodes respondents believed this to be the case. The vast majority of students at both universities believed there to be a significant proportion (at least 25%) of either PE or NPE students in the class. It was assumed therefore that NPE students would have come into contact with PE students in one way or another and would therefore be able to express opinions regarding PE student advantage and related issues.

It should be noted that statistical testing of the data contained in Table 6.3 was not carried out and that interpretation of the data merely provided an indication that students were likely to be aware of the issues under scrutiny.

6.3 Testing the Hypotheses

The analysis and interpretation of results which follow are divided into sections which correspond with the hypotheses identified in Chapter 4. Each section is structured in the following manner:-

- (i) Results of statistical tests of hypotheses for all respondents.
- (ii) Results of tests for independence of responses by the following variables:-
 - Rhodes/Natal
 - NPE/PE
 - ACCI/ACCO
- (iii) Discussion and interpretation of results.

6.3.1 Hypothesis 1

H : The majority of students believe that high school accountancy provides the student with an advantage in the first year university financial accounting course.

The data set out in Table 6.4 was gathered from Question 2 of Section B of the questionnaire. This question contained 9 fixed response categories each concerning an area of possible advantage afforded by high school study of accounting. Students were able to give advantages not listed among the fixed responses. One of the fixed responses was "no advantage". The answers to Question 2 are analysed in Table 6.4.

Table 6.4 : Responses to Question 2, Section B

Number of Advantages										
0	1	2	3	4	5	6	7	8	9	10
15	93	141	202	209	145	118	89	65	49	1
Number of Respondents										

Table 6.4 shows, for example, that 118 respondents believed PE students to be advantaged in 6 respects.

6.3.1.1 Hypothesis 1 by Total Respondents

Table 6.5 : Responses to Question 2 by Total Respondents

No. of Advantages	No. of Respondents	% Respondents
0	15	1,3
One or more	1112	98,7

A large sample test for proportions tested :

$$H_0 : P \leq 0,5 \quad H_a : P > 0,5$$

Test results : Z statistic = 32,6772 P-value = 0,0000

H_0 is rejected. It is concluded therefore, that the majority of students believe that high school accounting provides the student with an advantage in the first year university accounting course.

6.3.1.2 Test for Independence by University

Table 6.6 : Responses to Question 2 by University

No. of Advantages	Rhodes	Natal
0	8	7
One or more	424	688

The Chi-square test, with Yates' correction, resulted in :

$$\chi^2 \text{ statistic} = 0,5357$$

$$P\text{-value} = 0,4641$$

H_0 cannot be rejected. It can be concluded therefore that respondents answered Question 2 independently of their PE or NPE status.

6.3.1.4 Test for Independence by ACCI/ACCO Status

Table 6.8 : Responses to Question 2 by ACCI/ACCO Status

No. of Advantages	ACCO	ACCI
0	10	5
One or more	485	627

A Chi-square test of independence was carried out to determine whether responses were independent of the academic status of respondents.

H_0 : Variables independent

H_a : Variables dependent

The Chi-square test, with Yates' correction, resulted in :

$$\chi^2 \text{ statistic} = 2,325$$

$$P\text{-value} = 0,1272$$

H_0 cannot be rejected. It can be concluded therefore that students answered Question 2 independently of whether they were Accounting I students or Accounting II, III or IV students.

6.3.1.5 Hypothesis 1 : Discussion and Interpretation of Results

It is clear from the analysis of the responses to Question 2 that students believe that high school accountancy provides the student with an advantage in the first year university course. Analysis also revealed that the responses were independent of whether respondents were from Rhodes or Natal, PE or NPE students and ACCO or ACCI students.

The results of Question 2 cannot be interpreted to show that students regard high school accounting to be a desirable preparation for the university course. Results only show that respondents believe PE students to have an advantage in the first year course. If the results of Question 2 are examined in conjunction with those of Question 3 (disadvantages arising from high school study of accounting) and Question 7 and 8 (whether with hindsight students would have chosen accountancy as a school subject) then it is possible to draw conclusions about respondents attitudes regarding the desirability of high school study of accounting as a preparation for the university course as is discussed later in this thesis.

Further analysis of the results of Question 2, while contributing in no way to testing the hypothesis H_a^1 , provides information of interest which is discussed below.

The data provided in Table 6.4 were analysed by variable in Table 6.9.

Table 6.9 : Responses to Question 2 by Variable (%)

No.adv.	Durban	Rhodes	PE	NPE	ACCI	ACCO
0	1.0	1.9	1.7	1.0	0.8	2.0
1	6.8	10.6	8.8	7.7	8.9	7.5
2	11.5	14.1	14.1	11.1	13.9	10.7
3	16.7	19.9	17.4	18.4	19.3	16.2
4	18.7	18.3	17.3	19.7	18.8	18.2
5	13.2	12.3	14.6	11.3	13.0	12.7
6	11.1	9.5	8.8	12.0	9.5	11.7
7	9.2	5.8	8.8	7.1	7.9	7.9
8	6.8	4.2	4.9	6.6	4.3	7.7
9	4.9	3.5	3.4	5.2	3.5	5.5
10	0.1	0	0.2	0	0.2	0

Table 6.9 shows that the number of advantages identified by each group of students to be reasonably uniform with the highest proportion of each group identifying 3 to 4 advantages arising from previous study of accounting.

While it is not of central importance to this study it is interesting to note the perceived areas of greatest advantage. Table 6.10 shows clearly that most students believe an understanding of the basic concepts of accounting to be the area of greatest PE student advantage, an opinion expected by the researcher.

Table 6.10 : Responses to Question 2 by Area of Advantage

Response Categories	No. of Respondents
1 = They understand the terminology used in Accounting	846
2 = They understand the basic concepts	981
3 = They take less time to do their assignments	480
4 = They can 'follow' the lecturer better	661
5 = They have to spend less time on accounting studies	427
6 = They can spend more time on their other subjects	276
7 = They can miss lectures without being disadvantaged	190
8 = They are used to working with figures	264
9 = They have an 'overall' advantage	573
10 = Any other advantages	28

It is of particular interest that only 190 respondents believed that PE students could afford to miss lectures without being disadvantaged. It is also of interest to note that the advantages selected by most students were of a general nature. Advantages 1,2,4 and 9 were those most often selected and were all of a general nature. The more specific advantages proved less 'popular'. This trend may indicate that students are aware of PE student advantage but may not be able to identify specific advantages which are not of a general nature.

Analysis of area of advantage by variable is found in Table 6.11.

Table 6.11 : Responses to Question 2 by Area of Advantage and by Variable (% of Respondents)

Advan.	Durban	Rhodes	NPE	PE	ACCI	ACCO
1	78.4	69.7	68.5	81.0	73.4	77.2
2	87.1	87.0	82.6	91.1	85.8	88.7
3	43.0	41.9	49.0	36.9	41.9	43.4
4	62.3	52.8	53.3	63.5	60.2	56.2
5	40.3	34.0	42.0	34.2	34.2	42.6
6	35.7	29.6	33.6	33.2	30.2	37.2
7	19.0	13.4	18.2	15.7	12.2	22.8
8	26.5	18.5	15.2	30.8	21.4	26.1
9	55.5	43.3	49.5	52.0	50.2	51.7
10	3.6	4.9	5.6	2.7	4.4	3.6

It can be seen that the order of popularity of the various advantages is constant for all variables, the only exception being that NPE respondents rate advantage 7 before 8 while all other categories of respondent rate 8 before 7. It can be concluded therefore that attitudes regarding the various advantages are not dependent upon the category of respondent.

It is not surprising that PE students regard themselves to be at an advantage in the first year course. The terminology used and many of the concepts introduced in the Accounting I course are familiar to students who have spent at least three years studying the subject at

school. It is not surprising that NPE students hold similar opinions. They, through their association with PE students become aware of the issues. It is also of interest that students' opinions accurately reflect the findings of research reviewed and described in Chapter II and of research conducted and described in Chapter III of this thesis.

It is quite clear that research into the nature of PE student advantage is necessary in order that both educators and students can benefit optimally from that advantage. For example, research into the syllabuses of the high school course and the university course and into teaching methodology employed, would provide valuable data upon which educators, at both levels, could base their strategies. It may be that students perceive advantage simply because they are familiar with the topic when in fact this preconception precludes them from fully understanding the topic, in which case the institutions may be able to take steps to ensure that the topic is accurately perceived.

It would be extremely short-sighted and not in the interests of either institution or of students, for schools and universities to ignore the fact that their students perceive an overlap in courses and an advantage for PE students in Accounting I. Unless universities exclude PE students from their accounting courses, it seems absolutely necessary for a joint strategy to be developed which results either, in students recognising that no advantage accrues, if this is the case, or in students benefitting optimally from advantages which do accrue.

At present it would seem that some university educators either ignore or fail to perceive the views held by their students. At the very least PE students should be counselled so that they are able to use their advantages optimally.

6.3.2 Hypothesis 2

H_a^2 : The majority of students believe that high school accounting results in disadvantages for the PE student in the first year financial accounting course.

The data set out in Table 6.12 was gathered from Question 3 of Section B of the questionnaire. As in the case of Question 2 the question contained fixed response categories regarding possible areas of disadvantage resulting from high school study of accounting. One of the fixed responses was "no disadvantage" and respondents were able to give disadvantages not listed amongst the fixed responses.

Table 6.12 : Responses to Question 3, Section B

Number of Disadvantages					
0	1	2	3	4	5
194	406	395	115	16	1
Number of Respondents					

Table 6.12 shows, for example, that 115 respondents believed PE students to be disadvantaged in three respects.

6.3.2.1 Hypothesis 2 by Total Respondents

Table 6.13 : Responses to Question 3 by Total Respondents

No. of Disadvantages	No. of Respondents	% Respondents
0	194	17,2
One or more	933	82,8

A large sample test for proportions tested :

$$H_0 : P \leq 0,5 \quad H_a : P > 0,5$$

Test results : Z statistic = 22,0132 P-value = 0,0000

H_0 is rejected. It is concluded therefore, that the majority of students believe that high school accounting results in disadvantages for the PE student in the first year financial accounting course.

6.3.2.2 Test for Independence by University, NPE/PE Status, ACCI/ ACCO Status

Table 6.14 : Responses to Question 3 by Variables

No. of Disadvantages	Rhodes	Natal	NPE	PE	ACCO	ACCI
0	73	121	105	89	100	94
One or more	359	574	428	505	395	538

Chi-square tests of independence were carried out to determine whether responses were independent of the category of respondent (variable).

H_0 : Variables independent

H_a : Variables dependent

The Chi-square tests, with Yates' correction, revealed :

University

χ^2 statistic = 0,0196

P-value = 0,8885

H_0 cannot be rejected. It can be concluded that respondents answered Question 3 independently of the university to which they belonged.

NPE/PE

χ^2 statistic = 4,0607

P-value = 0,0438

H_0 cannot be rejected (1). It can be concluded that respondents answered Question 3 independently of their PE or NPE status.

ACCO/ACCI

$$\chi^2 \text{ statistic} = 5,1632 \qquad \text{P-value} = 0,0230$$

H_0 cannot be rejected. It can be concluded that respondents answered Question 3 independently of whether they were Accounting I students or Accounting II, III or IV students.

6.3.2.3 Hypothesis 2 : Discussion and Interpretation of Results

The analysis of responses to Question 3 clearly indicates that respondents believe PE students to be disadvantaged because of their prior exposure to the subject. This opinion is held by all categories of respondent.

The fact that respondents believe high school accounting to result in disadvantages for the PE student does not imply that high school accounting is an undesirable preparation for Accounting I. It was pointed out in Section 6.3.1.5 that the results of this question should be analysed in conjunction with the results of related questions in order to draw conclusions regarding the desirability of high school accounting for the university bound student.

Further analysis of the data provided by answers to Question 3 are found in Table 6.15.

Table 6.15 : Responses to Question 3 by Area of Disadvantage

Response Category	No. of Respondents
1 = They become over confident because they know more	558
2 = They are confused because school accounting is different from university Accounting I	320
3 = They find the first few weeks so easy that they become over confident	505
4 = They become bored because the course does not challenge them	183
5 = Any other disadvantage	44

Table 6.15 suggests that respondents believe the major disadvantage to be one of over confidence (Numbers 1 and 3). Table 6.16 analyses responses to Question 3 further. It is interesting to note that Rhodes respondents believed disadvantage No. 3 to be most significant while Natal respondents believed disadvantage No. 1 to be most significant. This may be explained by the fact that at Rhodes the first term syllabus in Accounting I is mainly devoted to bookkeeping and is largely a repeat of work covered at school. It is quite conceivable that Rhodes PE students would "find the first few weeks easy". At Natal on the other hand, the second term is devoted to bookkeeping with the first term concentrating largely on theoretical issues which are not covered in the school syllabus. It is understandable, therefore, that Natal respondents do not find the first weeks as easy as their Rhodes counterparts.

Table 6.16 : Responses to Question 3 by Area of Disadvantage and by Variables (% of Respondents)

Disad.	Durban	Rhodes	NPE	PE	ACCI	ACCO
1	63.4	36.6	49.7	49.3	52.8	45.3
2	29.9	25.9	21.8	34.3	30.5	25.7
3	36.8	57.6	49.9	40.2	44.6	45.1
4	19.0	11.8	14.1	18.2	14.6	18.4
5	2.7	5.8	3.2	4.5	4.1	3.6

Neither Rhodes nor Natal (Durban) make any special provision for PE students. Drysdale of Howick High School even believes that Natal would prefer their students not to have prior exposure to accounting (Appendix 1). It is not surprising, therefore, that PE students experience some disadvantages in Accounting I. Any student transferring from school to university is likely to experience difficulty if the two institutions ignore each other's requirements. It would be ludicrous, for example, for the Mathematics Department of a University to design a first-year course which completely ignored the student's high school background in mathematics. This is not to say that the university should necessarily accept the high school's approach, but it must recognise what the student has already learned and take steps to ensure that any disadvantage arising from prior study are minimised.

It would seem that at both Rhodes and Natal few, if any, steps are taken to alleviate the perceived disadvantages of PE students. In view of the fact that PE students constitute a very significant proportion of the class at both institutions it is surprising and even alarming that no remedial action is taken. There are a number of strategies which these two universities could adopt which might solve or at very least partially solve the problem. Some other universities in South Africa have addressed the issue. Pretoria University, for example, has separate courses for PE and NPE students. It is not suggested that this is the best solution, but it does provide evidence that the problem is not being ignored.

In view of the fact that PE students form a significant proportion of the first year class, it is submitted that action should be taken to address the question of PE student disadvantage identified in this study. The following are some suggestions in this regard.

- Separate courses for PE and NPE students in the first semester or even the first year.
- Extra assignments for PE students which may alleviate the boredom factor.
- Counselling of PE students in order to alert them to the possible disadvantages arising from prior study.
- Extra lectures for NPE students on topics with which PE students are familiar.
- Additional "challenging" assignments for PE students. This may result in the over confidence problem being minimised.

- Extra lectures for PE students which relate the school syllabus to the University syllabus and approach. These lectures could have the objective of highlighting differences and identifying weaknesses in the high school course. The lectures would amount to counselling students in order that they avoid the disadvantages arising from prior study.

Students opinions regarding some of these alternatives were surveyed and are discussed at 6.4.2.1.

6.3.3 Hypothesis 3

H_a^3 : The majority of students believe that PE students would score similar marks to NPE students in each of:-

- An April test
- A mid-year examination
- A September test
- A year-end examination.

The data in Table 6.17 were gathered from Question 4 of Section B of the questionnaire. Questions regarding each examination and test contained three fixed alternative responses. The question required that respondents give their opinion as to which of PE or NPE students would score better on the particular test or examination (fixed alternative 1 and 2) or whether students would score similar marks (fixed alternative 3).

Table 6.17 : Responses to Question 4, Section B

Test/ Exam.	April			Mid-year			September			Year-end		
	PE	NPE	Sim.	PE	NPE	Sim.	PE	NPE	Sim.	PE	NPE	Sim.
No.	759	56	309	730	43	348	253	67	790	200	61	848

3 respondents did not answer this question at all and a further 15 respondents did not answer all sections of the question.

Table 6.17 shows, for example, that 43 respondents believed that NPE students would do better than PE students on the mid-year examination.

6.3.3.1 Hypothesis 3 by Total Respondents

A large sample test for proportions tested:

$$H_0 : P \leq 0,5$$

$$H_a : P > 0,5$$

April

Test results : Z statistic = -15,0927 P-value \approx 1

H_0 cannot be rejected. The majority of respondents do not, therefore, believe that PE and NPE students would score similar marks.

It can be concluded therefore, from Table 6.17 that the majority of students believed that PE students would do better on the April test.

Mid-year

Test results : Z statistic = -12,6936 P-value \approx 1

H_0 cannot be rejected. Findings and conclusions are the same as for the April test.

September

Test results : Z statistic = 14,1070 P-value = 0,0000

H_0 is rejected. The majority of respondents believe, therefore, that PE and NPE students would score similar marks.

Year-end

Test results : Z statistic = 17,6267 P-value = 0,0000

H_0 is rejected. Findings are the same as for the June examination.

6.3.3.2 Test for Independence by University

Table 6.18 : Responses to Question 4 by University

	April		Mid-year		September		Year-end	
	Rhodes Natal		Rhodes Natal		Rhodes Natal		Rhodes Natal	
Similar Scores	30	279	172	176	346	444	364	484
Different Scores	402	413	260	513	86	234	68	193
PE higher	385	374	238	492	51	202	29	171
NPE higher	17	39	22	21	35	32	39	22

Chi-square tests of independence were carried out to determine whether responses were independent of the university to which the respondent belonged.

H_0 : Variables independent

H_a : Variables dependent

The Chi-square test, with Yates' correction, revealed:

April

χ^2 statistic = 146,939 P-value = 0,0000

H_0 is rejected. Thus responses were dependent on the university attended by the respondent. This finding is not surprising in view of the differences in the syllabuses, in the first term, of the two universities. It was mentioned in 6.3.2.3 that the Rhodes syllabus in the first term consisted mainly of bookkeeping with which PE students would be familiar. The Natal first term syllabus, on the other hand, consisted mainly of new topics. It is not surprising therefore, that respondents have different opinions regarding the advantage that PE students would be likely to enjoy in a test at the end of the first term (April).

Mid-year

χ^2 statistic = 24,5976 P-value = 7,06389E-7

September

χ^2 statistic = 26,7283 P-value = 2,34164E-7

Year-end

χ^2 statistic = 23,1833 P-value = 1,47268E-6

H_0 is rejected for the mid-year examination, September test and the year-end examination. Thus responses were dependent on the university attended by the respondent in all four of the tests and examinations.

It should be noted that this finding in no way indicates that the results of testing H_a^3 would be different in any test or examination

April

χ^2 statistic = 4,4428 P-value = 0,0350

Mid-year

χ^2 statistic = 0,0916 P-value = 0,7620.

September

χ^2 statistic = 0,1432 P-value = 0,7051

Year-end

χ^2 statistic = 0,7586 P-value = 0,7829

H_0 is accepted for all four tests and examinations. Thus responses to Question 4 were independent of whether students had studied accounting at school or not.

It is significant that both PE and NPE students have the same opinions regarding achievement on tests and examinations. This is an indication that NPE students are aware of PE students degree of advantage and vice versa as are PE students of NPE students.

6.3.3.4 Test for Independence by ACCI/ACCO Status

Table 6.20 : Responses to Question 4 by ACCI/ACCO Status

	April		Mid-year		September		Year-end	
	ACCI	ACCO	ACCI	ACCO	ACCI	ACCO	ACCI	ACCO
Similar Scores	209	100	192	156	439	351	462	386
Different Scores	421	394	435	338	177	143	153	108
PE Higher	388	371	418	312	146	107	124	76
NPE Higher	33	23	17	26	31	36	29	32

Chi-square tests of independence were carried out to determine whether responses were independent of ACCI/ACCO status.

H_0 : Variables independent H_a : Variables independent

The Chi-square tests, with Yates' correction, revealed:

April

χ^2 statistic = 22,5847 P-value = 2,01085E-6

H_0 is rejected. Responses to Question 3 regarding the April test were dependent upon ACCI and ACCO status.

Mid-year

χ^2 statistic = 0,0777 P-value = 0,7804

September

χ^2 statistic = 1,30222E-4 P-value = 0,9908

Year-end

χ^2 statistic = 1,2219 P-value = 0,2689

H_0 is accepted for the Mid-year and Year-end examinations and the September test. Responses to Question 3 for these examinations and the test were independent of ACCI and ACCO status.

The fact that the variables were not independent for the April test is not regarded as significant as the pattern of responses for ACCI and ACCO respondents was similar. Thus H_a^3 (Total Respondents) was not queried as a result of this discrepancy.

6.3.3.5 Hypothesis 3 : Discussion and Interpretation of Results

It is clear from the analysis of responses to Question 4 that respondents believe that students would not score similar marks in either the April test or mid-year examination. Table 6.17 indicates that the majority believe that PE students would do better in this test and examination. Analysis shows that respondents believe that the majority of students would score similar marks in the September test and year-end examination.

Tests for independence showed that the university variable was significant in that responses were dependent upon the university for all tests and examinations. It was pointed out that this was probably due to differences in syllabuses. Responses proved to be independent of the other variables.

Respondents believed that PE students would score better in the April test and mid-year examination. This finding reinforces that of Hypothesis 1 in that respondents indicated that they believe that PE

student advantage manifests itself in better results in the test and examinations held in the first half of the year. A relatively large proportion of respondents believed this advantage continued to exhibit itself in the September test and Year-end examination although the majority of respondents thought that PE and NPE students would score similar marks in this test and examination. An extremely small proportion of respondents believed that NPE students would score better than PE students in any of the tests and examinations. This may be interpreted as an indication that respondents did not consider PE students disadvantage to affect their test or examination performance. This observation is of particular importance because the test of Hypothesis 2 indicated that respondents believed PE students to be disadvantaged. However, it would seem that evidence of this advantage is not to be found in respondents opinions regarding test and examination performance.

The results of testing Hypothesis 3 seem, therefore, to support the findings of Hypothesis 1 tests, but may contradict the findings of Hypothesis 2 tests.

Had the Accounting I courses at the two universities been structured in a manner which catered for PE students, respondents may have believed advantage on tests and examinations to extend to the September test or even the Year-end examination. It is particularly interesting that the research described in Chapter III revealed that PE students advantage diminished with each consecutive test and examination until the year-end examination showed that neither PE nor

NPE students were advantaged. Thus opinions of students accurately reflected actual performance.

It is likely that PE students performance in the September test and year-end examination would be improved if steps were taken to structure the course in a manner which took account of their prior exposure to the subject. In whatever manner the course is structured a stage must be reached when PE students no longer enjoy an advantage. The question which university educators should be addressing is not how long PE students can maintain their advantage, but rather how the course can be structured so as to make previous exposure as worthwhile as possible. It is contended, in other words, that superior performance by PE students should not be the issue but that sound course structure which caters for the backgrounds of both PE and NPE students, should be the focus of attention.

6.3.4 Hypothesis 4 ,

H_a^4 : The majority of students believe that PE student advantage continues into the second year university financial accounting course.

It was pointed out in Chapter 4 that this hypothesis could only be tested if Hypothesis 1 was accepted. Question 5 of Section B of the questionnaire elicited information regarding H_a^4 . The question was framed in a manner which required respondents to answer either "Yes" or "No" regarding their opinion of PE advantage continuing into Accounting II.

Table 6.21 : Responses to Question 5, Section B

	Total	Rhodes	Natal	NPE	PE	ACCI	ACCO
Yes	261	97	164	107	154	157	104
No	839	327	512	416	423	453	386

Twenty-seven respondents failed to answer Question 5.

6.3.4.1 Hypothesis 4 by Total Respondents

A large sample test for proportions tested:

$$H_0 : P \leq 0,5$$

$$H_a : P > 0,5$$

Test results: Z statistic = -17,4273 P-value \approx 1

H_0 cannot be rejected. It can be concluded therefore, that the majority of students believe that PE student advantage does not continue into the second year course.

6.3.4.2 Test for Independence by University, NPE/PE Status, ACCI/ACCO Status

Chi-square tests of independence were carried out to determine whether responses were independent of the category of respondent (variables).

$$H_0 : \text{Variables independent}$$

$$H_a : \text{Variables dependent}$$

The Chi-square tests, with Yates' correction, resulted in:-

University

$$\chi^2 \text{ statistic} = 0,204$$

$$\text{P-value} = 0,6513$$

NPE/PE

$$\chi^2 \text{ statistic} = 5,546$$

$$\text{P-value} = 0,0185$$

ACCI/ACCO

χ^2 statistic = 2,814

P-value = 0,934

H_0 cannot be rejected for any of the variables. Thus responses to Question 5 were independent of all three variables.

6.3.4.3 Hypothesis 4 : Discussion and Interpretation of Results

The majority of students clearly did not believe that PE student advantage continues into the second year. Responses to this question were independent of the category of student (variables).

This finding correlates with those of the previous section (Hypothesis 3) in that it was found when testing H_a^3 that respondents believed PE student advantage, in the form of better test and examination results, had already disappeared in the latter half of the first year. It seems reasonable, therefore, that respondents would express the opinion that PE student advantage does not extend into the second year.

The research described in Chapter 3 of this thesis found that PE student advantage diminished with each successive test and examination until in the first year-end examination there was no significant difference in performance of PE and NPE students. The opinions expressed by respondents in this section of the study correlate closely with the findings of the empirical study.

Despite the fact that H_a^4 is rejected, it should be noted that 23,7% of students believe PE student advantage to extend into the second year.

Many students gave as their reason for believing that PE students were not at an advantage in the second year, that the second year syllabus bore no resemblance to the school syllabus. The implication of this is that these students regard advantage as being directly related to topics common to the school and university syllabuses. There is no doubt that where topics are common students are likely to perceive an advantage for PE students. An example of this, at Rhodes, is a section in the first year syllabus dealing with bank and creditors reconciliations. It is the researcher's experience that PE students find this section less problematic than NPE students and that students are aware of PE students' advantage in this respect.

It is far less likely that students perceive advantages not directly related to topics. It is contended that PE students, by virtue of their familiarity with techniques, have an advantage even in topics which are new to them. Of course, once NPE students have mastered techniques to the same extent, this relative advantage falls away. The implications for university educators are that in designing courses, both prior exposure to specific topics, as well as familiarity with basic techniques, should be taken into account.

6.3.5 Hypothesis 5

H_a^5 : The majority of students would with the benefit of hindsight, choose accountancy as a school subject.

Data required for testing this hypothesis was gathered from Question 7 of Section B of the questionnaire. Respondents were asked if, with

the benefit of hindsight, they would have chosen accountancy as a school subject. The question allowed respondents to answer either "yes" or "no".

Table 6.22 : Responses to Question 7, Section B

	Total	Rhodes	Natal	NPE	PE	ACCI	ACCO
Yes	909	339	570	337	572	527	382
No	212	92	120	193	19	102	110

Six respondents failed to answer Question 7.

6.3.5.1 Hypothesis 5 by Total Respondents

A large sample test for proportions tested :

$$H_0 : P \leq 0,5$$

$$H_a : P > 0,5$$

Test results:

$$Z \text{ statistic} = 20,8175$$

$$P\text{-value} = 0,0000$$

H_0 is rejected. The majority of students would, therefore, with the benefit of hindsight, have chosen accountancy as a school subject.

6.3.5.2 Tests for Independence by University, NPE/PE status, ACCI/ACCO Status

Chi-square tests of independence were carried out to determine whether responses were independent of the category of student (variables)

$$H_0 : \text{Variables independent}$$

$$H_a : \text{Variables dependent}$$

The Chi-square test, with Yates' correction, resulted in :-

University

χ^2 statistic = 2,453 P-value = 0,1173

H_0 cannot be rejected. Responses to Question 7 were independent of the university attended by respondents.

NPE/PE

χ^2 statistic = 198,681 P-value = 0,000

H_0 is rejected. Responses to Question 7 were dependent upon NPE or PE status. It is not surprising that respondents answers were dependent on whether or not they had taken accountancy as a school subject. Students who had chosen an alternative school subject presumably did so for reasons considered valid at the time and would, therefore, be less likely to change their opinions, even with the benefit of hindsight, than PE students.

It is particularly significant that 63,6% (337 respondents) of the NPE respondents indicated that they would, with the benefit of hindsight, have changed their choice of school subjects to include accounting. 96,8% (572 respondents) of the PE respondents indicated that they would not have changed their choice of accountancy as a school subject.

ACCI/ACCO

χ^2 statistic = 6,395 P-value = 0,0114

H_0 cannot be rejected (1). Responses to Question 7 were independent of respondents academic status.

6.3.5.3 Hypothesis 5 : Discussion and interpretation of results

The majority of respondents (81.1%) indicated that given the opportunity to choose their school subjects again they would include accounting in their subject package. Answers to Question 7 were independent of university attended and academic status but were dependent on whether or not respondents had actually taken the subject at school.

Conclusions cannot be drawn regarding the desirability of school accounting as a preparation for the university course, from the fact that the majority of respondents would choose to take accountancy at school given the benefit of hindsight because the reasons for expressing this opinion have not been determined. However if this information is interpreted in conjunction with that resulting from responses to Question 8 (Hypothesis 6) a conclusion in this regard may be made.

That so many respondents would choose accounting as a school subject is also an indication that they believe the disadvantages resulting from prior study not to be of significance. It is reasonable to conclude that had respondents believed disadvantages to be significant they would have expressed reservations about choosing accounting as a school subject. This leads the researcher to believe that the disadvantages identified in 6.3.2 above are not considered by respondents to be of much importance.

It is significant that such a large proportion of respondents indicated that they would choose accounting as a school subject. This is a factor which the authorities would do well to consider when making decisions about exemption status for accounting as a school subject.

This is also a factor which university educators would do well to note. It is quite likely that the attitudes of university accounting students regarding the desirability of accounting as a school subject will filter back to schools and this is likely to influence some pupils in their subject choice. If this does occur, the number of PE students in Accounting I will rise and pressures for curriculum innovation will increase.

It is suggested that if proper provision is made for both PE and NPE groups in Accounting I the perceived advantage of PE students may become less of a determining factor in the subject choice decision at high school. If NPE students are made to understand that, while PE students have an advantage from their prior studies, the Accounting I course is structured in a manner which recognises the difference in background of students, they may well not regret failing to take the subject at school. In other words, if students understand that the course is designed to meet the needs of the two groups of students and that there is a point at which no further distinction can be made between the two groups (perhaps at the end of the first semester or even the end of the first year) tertiary study of accounting may disappear as a factor in making subject choice at high school.

6.3.6 Hypothesis 6

H_a^6 : The majority of students who indicated that they would, with the benefit of hindsight, have chosen accountancy as a school subject, would do so because of the advantages arising from such prior study, during the first year university course.

Data required for testing this hypothesis was gathered from Question 8 of Section B of the questionnaire. This question was only to be answered by respondents who had answered in the affirmative to Question 7 (those respondents who had indicated that they would, with the benefit of hindsight, have chosen accountancy as a school subject). These respondents were asked to indicate whether the answer to Question 7 was influenced by the fact that prior study of accounting results in an advantage in the first year university course. The question allowed respondents to answer either "yes" or "no".

Table 6.23 : Responses to Question 8, Section B

	Total	Rhodes	Natal	NPE	PE	ACCI	ACCO
Yes	733	262	471	304	429	433	300
No	175	78	97	35	140	93	82

One respondent who answered "yes" to Question 7 failed to answer Question 8.

6.3.6.1 Hypothesis 6 by Total Respondents

A large sample test for proportions tested:

$$H_0 : P \leq 0,5$$

$$H_a : P > 0,5$$

Test results:

$$Z \text{ statistic} = 18,5178$$

$$P\text{-value} = 0,0000$$

H_0 is rejected. It is concluded therefore, that the majority of students who answered in the affirmative to Question 7 did so because of the advantages arising from studying accountancy at school, during the first year university course.

6.3.6.2 Tests for Independence by University, NPE/PE Status, ACCI/ACCO Status

Chi-square tests for independence were carried out to determine whether responses were independent of the category of student (variable).

$$H_0 : \text{Variables independent}$$

$$H_a : \text{Variables dependent}$$

The Chi-square test, with Yates' correction, resulted in:-

University

$$\chi^2 \text{ statistic} = 4,331$$

$$P\text{-value} = 0,0374$$

H_0 cannot be rejected (1). Responses to Question 8 were independent of the university attended by respondents.

NPE/PE

$$\chi^2 \text{ statistic} = 26,933$$

$$P\text{-value} = 0,0000$$

H_0 is rejected. Responses to Question 8 were dependent on whether respondents were PE or NPE students. Of NPE students who answered this question 89,7% (304 respondents) indicated that they would have chosen accountancy at school because of the advantage they considered this would have given them in the first year university course. The

corresponding percentage for PE students was 75,4% (429 respondents).

It was anticipated that responses to Question 8 would be dependent on PE/NPE status because PE students would undoubtedly have had a number of reasons for having chosen accountancy as a school subject. It is obvious from Table 6.23 that, for PE respondents, the major reason, with hindsight, for choosing accountancy would have been the advantage afforded in the Accounting I course. The pre-disposition for accounting, evidenced by their choice of the subject at school, suggests that other factors may have influenced decisions. NPE students, on the other hand, did not take accountancy at school, presumably because they preferred other subjects at the time. When asked to reconsider this decision with hindsight, it is likely that the reason for change in opinion lies in insights gained since making the subject choice decision. PE students indicated, by their answers to Question 8, that the insights gained were predominantly into advantage in first year accounting resulting from prior study.

ACCI/ACCO

χ^2 statistic = 1,802

P-value = 0,1795

H_0 cannot be rejected. Responses to Question 8 were independent of academic status.

6.3.6.3 Hypothesis 6 : Discussion and Interpretation of Results

The majority of respondents (80.7%) indicated that they would, with the benefit of hindsight, have chosen accounting as a school subject because of the advantages this would give them in the first year

university course. Responses were independent of university and academic status of respondents but were dependent on whether or not accountancy had actually been taken at school.

733 respondents (65% of the total sample) indicated that they would take accounting at school because of advantage emerging in Accounting I. The information derived from Questions 7 and 8 clearly indicates that the majority of respondents regard school accounting to be of such an advantage to the first year accounting student that they would select the course for high school study.

Once again the responses were not unexpected. In the opinion of the researcher accounting courses are notoriously difficult and students are likely to seize upon anything which would enhance their prospects for success. Thus the perception that PE students are advantaged is likely to result in both PE and NPE students indicating that they would choose the subject at school level, given the chance again, because of the benefit derived in Accounting I.

It was pointed out in 6.3.5.3 above that it is possible that these views would change if students understood the Accounting I course to be structured in a manner which took into account the backgrounds of students. If NPE students knew that the Accounting I course was designed for their needs as well as for those of PE students the opinions regarding the desirability of high school accounting may well have been different.

6.4 Conclusion

This chapter describes the testing of 6 hypotheses each of which has provided information about student attitudes regarding high school study of accounting. Tests have provided information which shows that the majority of students:

- (i) believe that high school accountancy provides the student with an advantage in Accounting I.
- (ii) believe that high school accountancy also results in disadvantage for PE students in Accounting I.
- (iii) believe that PE students would score higher marks than NPE students on the April test and June examination but that PE and NPE students would score similar marks on the September test and year-end examination.
- (iv) believe that PE student advantage does not continue into the second year of university study.
- (v) would, with the benefit of hindsight, have chosen accountancy as a school subject.
- (vi) would, with the benefit of hindsight, have chosen accountancy as a school subject because of the advantages arising from such study, during the first year university course.

It is clear that the majority of respondents believe PE students to be advantaged by virtue of their prior study of accounting. This conclusion is drawn from direct questioning and also from opinions regarding performance on tests and examinations. Students consider that this advantage does not continue into the second year of study and it was assumed further that they believe that this advantage does

not extend into the second half of the first year. This conclusion is drawn from responses to questions regarding the September test and year-end examination. Indications are, therefore, that the majority of respondents believe PE students to be at an advantage in only the first semester of the first year course.

Respondents also believed that prior study of accounting resulted in disadvantages for the PE student, particularly boredom and over confidence. It is significant that the majority of respondents believed that these disadvantages would not manifest themselves in lower test or examination scores. It is also important that despite believing PE students to be disadvantaged, the majority of respondents indicated that if given the opportunity they would choose accountancy as a school subject because of the advantages that arise in Accounting I. It can be concluded therefore that students believe advantages arising from prior study outweigh disadvantages.

Discussion of the implication of these findings will be confined to

- choice of accountancy as a school subject
- curriculum innovation in Accounting I.

6.4.1 Accountancy - A School Subject?

It is clear that the majority of respondents, if required to give guidance regarding selection of school subjects, would advise choosing accountancy if the pupil intended studying accounting at university. This conclusion is reached because respondents indicated that given the opportunity again they would have done so themselves.

It is not contended that this advice would necessarily be sound. The pupil facing subject choice at the beginning of the fourth phase of secondary schooling, should consider many factors before finalising his or her choice. One such factor may be the question of preparation for university accounting in which case the pupil would be well advised to acquaint himself with the opinions of university accounting students.

It has already been pointed out that opinions expressed by respondents were influenced by the way in which the Accounting I course at Rhodes and Natal are currently structured and that these opinions may well have been different had the Accounting I courses recognised the heterogeneous nature of the classes.

It is the researcher's opinion that subject choice at high school should not be influenced by factors such as preparation for tertiary education. Choice should be based upon the aptitudes, abilities and interests of pupils. Choice based upon these factors may well result in subjects being chosen which will also be studied at tertiary level but, on the other hand, this need not necessarily be the case. Accounting, if chosen because of an aptitude, ability or interest in the subject should prove ideal for the general education of the child. As with any subject, however, the syllabus and quality of teaching are very important factors.

It can be argued that the only reason that formal schooling and schools are necessary is because the child cannot learn effectively from the world around him. Thus schools are an attempt to provide a structure in which learning can take place. Within this context accounting can provide an excellent vehicle for a general education. Not only can arithmetic, reading, comprehension and other skills be learned, but insights into business and the economy (local, country-wide and world-wide) can be gained. It is possible with accounting, as it is with most subjects, to extend the education process to encompass many other areas of educational importance.

Unfortunately, current practice is far from ideal. The accounting syllabus is restricted mainly to bookkeeping skills with little attention being paid to accounting theory, and the broader issues mentioned above. The restrictive syllabus, together with generally poorly qualified teachers, results in a subject which is, in many quarters, regarded as inferior.

Despite the deficiencies of accounting as a school subject, it still results in the acquisition of accounting skills which provide the PE student with advantages in the first year university course.

6.4.2 Accounting I : Curriculum Innovation

Curriculum innovation often begins with evaluation of the existing curriculum. The results of the assessment will enable the curriculum designer to alter the course accordingly. Methods of evaluation range from the traditional objective method where educational effects

are tested under controlled conditions, to the illuminative approach (2) where objective measurement is abandoned. The aims of an illuminative evaluation are to study the educational programme and in particular how it operates, how it is influenced by situations in which it is applied, what people directly concerned regard as its advantages and disadvantages and how students intellectual tasks and academic experience are affected. Clearly an understanding of students opinions is necessary if evaluation of this kind is to be undertaken.

The information already provided within this Chapter regarding students opinions, should be invaluable to those responsible for the Accounting I curriculum. In addition to the data already described students' views regarding the methods of organising the Accounting I curriculum were surveyed.

6.4.2.1 Students Opinions Regarding the Accounting I Curriculum

Question 6 of Section B of the questionnaire required respondents to indicate their opinion, on a scale of 1 - 5, of a number of ways of organising the first year accounting course.

Seven different options were provided. Respondents considered these independently of one another, and rated their potential usefulness according to the following scale :

- 1 = Highly Detrimental
- 2 = Detrimental
- 3 = Neutral
- 4 = Beneficial
- 5 = Highly beneficial.

The different options were as follows.

1. A pre-semester course for NPE students which would enable them to 'catch up' to those students who have done accountancy at school.
2. A different set of lectures and assignments for PE students, designed to avoid repetition of work done at school, and a beginner course for NPE students.
3. School accountancy as a pre-requisite for university accounting.
4. No school accountancy as a pre-requisite for university accounting.
5. The same lectures for all students but different assignments for the two groups.
6. Extra lectures for NPE students.
7. The same course for all students, based on the assumption that no student has any knowledge of accounting.

Table 6.24 : Opinions Regarding Accounting I Curriculum by Total Respondents

	H.DETRI.	DETRI.	NEUTRAL	BENEF.	H.BENEF.
Option 1	23	37	163	594	302
2	139	371	296	226	86
3	629	210	168	77	34
4	737	197	148	23	13
5	112	359	363	242	40
6	21	84	217	553	244
7	40	129	387	283	275

Some respondents did not respond to Question 6 or to options within the question.

From the above table, it is possible to rank the options in terms of how beneficial students felt they would be. In descending order of popularity, they are ranked as follows:

1, 6, 7, 2, 5, 3, 4.

Options 1 and 6 are clearly the most favoured. 79.5% of respondents felt that a pre-semester course for NPE students would be beneficial or highly so and 73.9% of respondents felt that extra lectures for NPE students would be beneficial or highly so. Options that were clearly considered to be very unpopular were those that dealt with entry requirements for Accounting I.

Only 50% of respondents believe the present structure of Accounting I (Option 7) to be either beneficial or highly so. This, with the strong support for options 1 and 6, indicates that respondents believe that the present course structures are not ideal. The responses to Question 6 were independent of the university attended by the respondent with ranking of options being the same for both Rhodes and Natal.

It has already been pointed out that the researcher believes that the Accounting I course should be designed in a manner which takes into account the different backgrounds of students. Restriction on admission of either PE or NPE students is rejected for a number of reasons, the most important of which is that the implication of such a policy would be that career choice would have to be made at the beginning of the fourth phase of secondary education.

It is suggested therefore that any, or a combination of any, of options 1, 2, 5 and 6 should be considered by educators responsible for Accounting I course design. The only way in which the problem will be solved will be by experimenting with options until the most suitable for the particular institution, is identified. It is recommended, therefore, that curriculum innovation in Accounting I, with reference to PE and NPE students, be an on-going process. It is quite likely that the composition of the class and, indeed, the quality of the high school course will change with time, which further supports the contention that curriculum innovation should be on-going.

Unfortunately the options available for Accounting I course design are restricted by practical considerations such as availability of staff. For example, a course design which allows for different lectures and assignments for the two groups would probably require additional staff. Practical considerations are a restriction on any curriculum. It is hoped that research of the nature conducted by the researcher will provide incentive and justification for those seeking additional resources.

CHAPTER VI

REFERENCES AND NOTES

- (1) These hypotheses were tested using chi-square tests for independence. The level of significance for each chi-square test was reduced by dividing the nominal level of significance by the number of individual chi-square tests performed to ensure that the overall level of significance was not higher than 5% i.e. the tests are significant if P-value 0,0028.
Miller, R. 1981 Simultaneous Inference, 2nd Edition New York: Springer.
- (2) Parlett, M. A New Evaluation, Trends in Education, July 1974, pages 13 - 18.

CHAPTER VII

SURVEY OF LECTURER OPINION : RESEARCH FINDINGS

7.1 The Respondents

Responses to the questionnaire were received from 193 accounting lecturers. The sample included lecturers at 16 universities with replies/returns being received from 14 with a further one university having a very poor response rate. It will be seen from Table 7.1 that the overall response rate was 76,9%.

The overall rate of response was considered adequate especially as the entire population of lecturers was included in the sample.

The lack of response from one university and the poor return from another were extremely disappointing. It was particularly disappointing in that the university which did not respond is an Afrikaans university, from which responses would have been very useful when testing opinions by language orientation. (See 4.3.7)

Table 7.1 : The Lecturer Survey : Population and Respondents

University	Abbreviation	Number of Lecturers	Number of Respondents	Response Rate %
Rhodes	Rhodes	9	7	77,8
Natal (Durban)	Durban	20	17	85,0
Natal (PMB)	PMB	9	9	100,0
Witwatersrand	Wits	20	19	95,0
Cape Town	UCT	30	21	70,0
Pretoria	Pretoria	26	24	92,3
Potchefstroom	Potch	9	9	100,0
Orange Free State	UOFS	5	5	100,0
Stellenbosch	Stellenbosch	19	16	84,2
Rand Afrikaans	RAU	12	0	0
Port Elizabeth	UPE	10	8	80,0
South Africa	UNISA	50	38	76,0
Fort Hare	Fort Hare	4	4	100,0
Transkei	UNITRA	11	11	100,0
Zululand	Zululand	7	4	57,1
Durban-Westville	Westville	10	1	10,0
TOTAL		251	193	76,9

(Abbreviations will be used hereafter).

7.2 Testing the Hypotheses

The analysis and interpretation of results which follow are divided into sections which correspond with the hypotheses identified in Chapter IV. Each section is structured in the following manner:

- (i) Results of statistical tests of hypotheses for all respondents.
- (ii) Results of tests for independence of responses by the following variables:

- Whether or not the lecturer has experience of teaching at Accounting I level

ACIY = Experience of teaching at Accounting I level

ACIN = No experience of teaching at Accounting I level.

- Whether or not the lecturer has taught at high school level

HSY = Taught at high school level

HSN = Has not taught at high school level.

- Number of years of academic experience

LES5 = 5 or fewer years of academic experience

MOR5 = 6 or more years of academic experience.

The purpose of including this variable in the study was to ascertain whether experienced lecturers held different views from their less experienced colleagues. The choice of five years academic experience as the distinction between experienced and less experienced lecturers is arbitrary. It is submitted that lecturers with five or fewer years of experience can be regarded as inexperienced while those with six or more years of experience can be classified as being experienced. It is accepted that a case could be made for raising or lowering this figure.

- whether or not the lecturer studied accounting at matriculation level:

MATY = Studied accounting at matriculation level

MATN = Did not study accounting at matriculation level.

(Abbreviations identified in this section will be used hereafter.)

(iii) Results of statistical tests of hypotheses by language orientation of the university. It was not possible to include language as a variable in (ii) above because some universities do not have a clear language orientation. For example, the University of Port Elizabeth clearly cannot be classified as either English or Afrikaans. The following universities, all with a clear language orientation, were included in this aspect of the study.

English

UCT
Wits
Durban
PMB
Rhodes

Afrikaans

Pretoria
UOFS
Potch
Stellenbosch

(iv) Discussion and interpretation of results.

7.2.1 Hypothesis 1

H_a^1 : The majority of accounting lecturers believe that PE students have an advantage compared to NPE students in the first year financial accounting course.

The data set out in Table 7.2 was gathered from Question 1 of Section B of the questionnaire. This question contained fixed response categories for "yes", "no" and "no opinion".

Table 7.2 : Responses to Question 1, Section B by University

University	Yes	No	No Response
Rhodes	7	0	0
Durban	9	5	3
PMB	8	0	1
Wits	16	2	1
UCT	12	5	4
Pretoria	24	0	0
Potch	9	0	0
UOFS	5	0	0
Stellenbosch	16	0	0
UPE	7	1	0
UNISA	35	1	2
Fort Hare	4	0	0
UNITRA	7	4	0
Zululand	2	1	1
Westville	0	1	0
TOTAL	161	20	12
%	83,4	10,4	6,2

(RAU has been excluded from this and other tables because of non-response.)

7.2.1.1 Hypothesis 1 by Total Respondents

A large sample test for proportions tested:

$$H_0 : P \leq 0,5 \qquad H_a : P > 0,5$$

Test results : Z statistic = 9,2856 P-value = 0,0000

H_0 is rejected. It is concluded, therefore, that the majority of lecturers believe that PE students have an advantage compared to NPE students in the first year university accounting course.

A Chi-square test for independence of responses by university was carried out

$$H_0 : \text{Variables independent} \qquad H_a : \text{Variables dependent.}$$

The Chi-square test resulted in :

$$\chi^2 \text{ statistic} = 60,438 \qquad P\text{-value} = 0,004$$

H_0 cannot be rejected (2). It can be concluded, therefore, that responses to Question 1 were independent of the university to which respondents belonged.

Examination of Table 7.2 shows that while respondents from all universities, with the exception of Westville (1), answered "yes" to Question 1, some universities provided a significant number of "no" responses while others had no negative responses at all.

It is contended that the differences in response trends correspond with the language orientation of the university. The question of language orientation is examined in 7.2.1.3.

7.2.1.2 Test for Independence by AC1Y/AC1N, HSY/HSN, LES5/MOR5, MATY/MATN

Table 7.3 : Responses to Question 1 by Variables

Answer	AC1Y	AC1N	HSY	HSN	LES5	MOR5	MATY	MATN
Yes	96	65	30	131	69	92	105	56
No	10	10	0	20	6	14	6	14
No Opinion	0	12	0	12	6	6	3	9

Chi-square tests of independence were carried out to determine whether responses were independent of the category of respondent (variable).

H_0 : Variables independent

H_a : Variables dependent

The Chi-square test revealed :

AC1Y/AC1N

χ^2 statistic = 16,256

P-value = 0,003

H_0 cannot be rejected. Thus responses were independent of whether respondents had experience of teaching at Accounting I level. Those

who have taught at this level have probably had direct experience of classes which contain both PE and NPE students and are thus likely to be more aware of the issues surrounding this question than those who have not taught at this level. This contention is supported by the number of respondents who had no opinion to offer. It is significant that the majority of both groups of respondents believed PE students to be advantaged, but that a greater proportion of respondents with Accounting I teaching experience believed this to be the case. It seems, therefore, that a better understanding of Accounting I, afforded by teaching at this level, strengthens respondents belief in PE student advantage.

HSY/HSN

χ^2 statistic = 7,060

P-value = 0,0293

H_0 cannot be rejected. It can be concluded, therefore, that respondents answered Question 1 independently of whether or not they had high school teaching experience. Examination of Table 7.3 shows that respondents with high school teaching experience all believed PE students to be advantaged. These respondents had experience at both high school and university level and it can be argued that they, of all respondents, are best placed to assess PE student advantage in the Accounting I course. If this argument is accepted it is significant that every one of these respondents believed PE students to be advantaged. It can also be argued, however, that those respondents with high school teaching experience are biased in favour of the high school course because of their direct association with high school

accounting and therefore, that their opinions favour PE students. The researcher considers the first argument to be stronger because it is assumed that university lecturers have the ability to examine the issues objectively and report their opinions accurately.

It is significant that the majority of respondents without high school teaching experience believe PE students to be advantaged. It is not surprising, in view of the arguments presented above, that proportionately fewer believe this to be the case than those with high school teaching experience. In this regard it should be noted that the P-value was extremely low and that had a level of significance of 0,05 been selected H_0 would have been rejected and it would have been concluded that responses to Question 1 were dependent on whether or not respondents had taught at high school level.

LES5/MOR5

χ^2 statistic = 1,546

P-value = 0,4615

H_0 cannot be rejected. It can be concluded that respondents answered Question 1 independently of the extent of their academic experience. This is a significant finding because it suggests that PE student advantage is recognised by lecturers with relatively little experience and that as the lecturer becomes more experienced his/her opinion regarding PE student advantage does not change.

MATY/MATN

χ^2 statistic = 15,268

P-value = 0,005

H_0 cannot be rejected. Thus responses were independent of whether or not the respondents had taken accounting as a high school subject. Examination of Table 7.3 shows that 92,1% of respondents with high school accounting believe PE students to be advantaged while the corresponding percentage for respondents without high school accounting was 71,1%. Respondents with high school accounting have had experience of studying accounting at high school level themselves, studying accounting at university level and teaching at university level. It can be argued that these respondents are better placed to assess PE student advantage than those without high school accounting. It is significant, however, that the majority of respondents without high school accounting also believe PE students to be advantaged.

7.2.1.3 Hypothesis 1 by Language Orientation

Table 7.4 : Responses to Question 1 by Language Orientation

Answer	English	Afrikaans	Total
Yes	52	54	106
No	12	0	12
No opinion	9	0	9
Total	73	54	127

A Chi-square test for independence was carried out to determine whether responses were independent of language orientation.

H_0 : Variables independent

H_a : Variables dependent

The Chi-square test resulted in:

χ^2 statistic = 18,612

P-value = 0,0001

H_0 is rejected. It can be concluded, therefore, that responses to Question 1 were dependent on the language orientation of the university to which the respondent belonged. It is clear from Table 7.4 that all respondents from Afrikaans universities believed PE students to be advantaged, while 71% of respondents from English universities believed this to be the case. It would appear, therefore, that the belief in PE student advantage is stronger amongst respondents from Afrikaans universities than it is amongst those from English universities.

Of interest is the fact that some English universities have taken minor steps to modify Accounting I curricula to take account of PE and NPE students, while some Afrikaans universities have introduced bolder innovations into the Accounting I curricula to differentiate between PE and NPE students. It has already been mentioned that Pretoria, for example, has introduced course structures which distinguish between the two categories of student.

It is also of interest that the proportion of respondents at Afrikaans universities who took accountancy at school themselves is far higher than is the case at English universities. This is illustrated in Table 7.5.

Table 7.5 : Language Orientation and Accounting as a School Subject

University	Total Respondents	Respondents with Matric Accounting	
		No.	Percentage
<u>English Universities</u>			
Rhodes	7	1	14,3
Durban	17	5	29,4
PMB	9	2	22,2
Wits	19	8	42,1
UCT	21	4	19,0
TOTAL	73	20	27,4
<u>Afrikaans Universities</u>			
Pretoria	24	19	79,2
Potch.	9	9	100,0
UOFS	5	5	100,0
Stellenbosch	16	12	75,0
TOTAL	54	45	83,3

In view of the high proportion of respondents from Afrikaans universities who took accounting as a high school subject and in view of the findings in 7.2.1.2 (MATY/MATN), it is not surprising that

answers to Question 1 were dependent on language orientation. It is clear that far fewer respondents from English universities took accounting at high school and also clear that a smaller percentage of these respondents believe PE students to be advantaged.

It should be noted that in terms of the other variables used in this study (AC1Y/AC1N, HSY/HSN, LES5/MOR5) no significant differences existed between the English orientated and Afrikaans orientated universities.

7.2.1.4 Hypotheses 1 : Discussion and Interpretation of Results

It is clear from the analysis of responses to Question 1 that lecturers believe that high school accounting provides the student with an advantage in the first year university course.

Of particular interest is that responses were dependent on language orientation of the university to which respondents belonged and that a high proportion of respondents from Afrikaans universities had taken accounting as a high school subject while this was not the case with respondents from English universities.

Answers to Question 1 give no indication of the extent of PE student advantage nor can these answers be properly interpreted until the question of disadvantage arising from prior study (Hypothesis 2) has been addressed.

In view of the fact that the majority of respondents believe PE students to be advantaged it is not surprising to find that many universities have conducted investigations into this issue. It was mentioned, in Chapter II, that UOFS, Wits, UCT and PMB had conducted research into the topic. The results of Question 16 of the questionnaire indicate that studies have taken place at most universities.

It is particularly interesting that the investigations conducted have resulted in curriculum innovations at very few universities. It must be concluded, therefore, that most of these studies have shown that special provision for PE and NPE students is not desirable. Alternatively, restrictions on resources available to departments may have prevented appropriate curricula from being implemented. It has been pointed out that some universities have designed their courses to take into account the heterogenous nature of the first year class. Universities that have done so fall mainly into the Afrikaans language category. This is not surprising in view of the findings in 7.2.1.3 which showed that respondents from Afrikaans orientated universities were more inclined to identify PE student advantage than were respondents from the English orientated universities.

The researcher believes that all universities should conduct on-going research into the issues surrounding PE student advantage. The nature of the school course is constantly changing as syllabuses, quality of teaching and subject choice patterns change. The introductory course at universities also change and therefore an on-

going understanding of the ramifications of prior study should be a priority, especially in the light of the fact that the majority of lecturers believe PE students to be advantaged.

University lecturers should use their insight into PE student advantage to counsel students so that they are able to use their advantages optimally.

7.2.2 Hypothesis 2

H_a^2 : The majority of accounting lecturers believe that PE students have disadvantages compared to NPE students in the first year financial accounting course.

The data set out in Table 7.6 were gathered from Question 2 of the questionnaire. As in the case of Question 1, the question contained fixed response categories for "yes", "no" and "no response".

Table 7.6 : Responses to Question 2, Section B by University

University	Yes	No	No Opinion
Rhodes	4	2	1
Durban	9	5	3
PMB	5	3	1
Wits	10	7	2
UCT	11	7	3
Pretoria	8	16	0
Potch	3	5	0
UOFS	1	4	0
Stellenbosch	8	8	0
UPE	5	2	1
UNISA	8	27	3
Fort Hare	3	0	1
UNITRA	6	5	0
Zululand	2	1	1
Westville	1	0	0
TOTAL	84	92	16
%	43,8	47,9	8,3

(1 respondent did not answer this question).

7.2.2.1 Hypothesis 2 by Total Respondents

A large sample test for proportions tested:

$$H_0 : P \leq 0,5$$

$$H_a : P > 0,5$$

Test results : Z statistic = -1,7321 P-value = 0,9582

H_0 cannot be rejected. It is concluded, therefore, that the majority of lecturers do not believe PE students to be disadvantaged.

A Chi-square test for independence of responses by university was carried out.

$$H_0 : \text{Variables independent}$$

$$H_a : \text{Variables dependent}$$

The Chi-square test resulted in

$$\chi^2 \text{ statistic} = 36,284$$

$$P\text{-value} = 0,1355$$

H_0 cannot be rejected. It can be concluded that responses to Question 1 were independent of the university to which respondents belonged. This result was somewhat surprising in the light of the fact that responses to Question 1 were dependent upon university and indicated that language orientation was the differentiating factor.

7.2.2.2 Hypothesis 2 by AC1Y/AC1N, HSY/HSN, LES5/MOR5, MATY/MATN

Table 7.7 : Responses to Question 2 by Variable

Answer	AC1Y	AC1N	HSY	HSN	LES5	MOR5	MATY	MATN
Yes	54	30	10	74	31	53	36	48
No	49	43	20	72	42	50	72	20
No opinion	2	14	0	16	7	9	5	11

A Chi-square test for independence was carried out to determine whether responses were independent of the category of respondent (variable).

H_0 : Variables independent

H_a : Variables dependent

The Chi-square tests revealed:

AC1Y/AC1N

χ^2 statistic = 14,690

P-value = 0,0006

H_0 is rejected. Thus responses were dependent upon whether respondents had experience of teaching at Accounting I level. Table 7.7 shows that the majority of respondents with Accounting I teaching experience believed PE students to be disadvantaged while the majority of respondents without Accounting I teaching experience felt the opposite to be true. It was pointed out in 7.2.1.2 that respondents

with direct experience of teaching at this level are probably aware of the issues surrounding prior exposure to accounting. The fact that Hypothesis 2 (total respondents) was rejected should, therefore, be interpreted in the light of the finding that the majority of AC1Y respondents believe Hypothesis 2 to be true. This suggests that no great reliance should be placed on the results of testing Hypothesis 2 by total respondents.

HSY/HSN

χ^2 statistic = 6,453

P-value = 0,0397

H_0 cannot be rejected. Thus respondents answered Question 2 independently of whether or not they had high school teaching experience. HSY respondents are well placed to assess PE student advantage by virtue of their teaching experience at both secondary and tertiary level (see 7.2.1.2). 33,3% of HSY respondents identified PE student disadvantage while 45,7% of HSN respondents did so.

This finding conflicts with that of the AC1Y/AC1N variable in that AC1Y respondents, on whose opinion great reliance is placed, identified PE student disadvantage to a greater extent than did HSY respondents who were also regarded as being the more reliable category. This dichotomy may be partially explained by the small sample size of HSY respondents which may have as a consequence, unreliable results.

LES5/MOR5

χ^2 statistic = 1,413

P-value = 0,4932

H_0 cannot be rejected. It can be concluded that respondents answered Question 2 independently of the extent of their academic experience.

MATY/MATN

χ^2 statistic = 28,220

P-value = 0,0000

H_0 is rejected. Thus responses were dependent on whether or not respondents had taken accounting as a high school subject. 31,9% of MATY respondents believed PE students to be disadvantaged while 60,8% of MATN respondents believed this to be the case. It was pointed out above that MATY respondents had the benefit of studying accounting at high school and university and teaching the subject at the latter level and that consequently they are well placed to give an opinion on this issue. The opinions of MATY respondents conflict, therefore, with those of AC1Y respondents.

7.2.2.3 Hypothesis 2 by Language Orientation

Table 7.8 : Responses to Question 2 by Language Orientation

Answer	English	Afrikaans	Total
Yes	39	20	59
No	24	33	57
No opinion	10	0	10
Total	73	53	126

A Chi-square test for independence was carried out to determine whether responses were independent of language orientation.

H_0 : Variables independent

H_a : Variables dependent

The Chi-square test resulted in :

$$\chi^2 \text{ statistic} = 14,736$$

$$P\text{-value} = 0,0006$$

H_0 is rejected. It can be concluded, therefore, that responses to Question 2 were dependent on the language orientation of the university to which the respondent belonged. It is clear from Table 7.8 that respondents from English universities tended to believe that PE students were at a disadvantage (53,4%) to a greater extent than did their colleagues from Afrikaans universities (37,7%). The fact that only 37,7% of respondents from Afrikaans universities believed PE students to be disadvantaged tends to suggest that curriculum

innovation which has taken place at these universities has resulted from a perception of PE student advantage rather than disadvantage. In other words courses are probably being designed to cater for PE student advantage rather than to remedy disadvantages.

7.2.2.4 Hypotheses 2 : Discussion and Interpretation of Results

The analysis of responses to Question 3 indicates that opinions regarding PE student advantage are conflicting. Hypothesis 2 is rejected for total respondents but analysis reveals that the majority of AC1Y and MATN respondents believe PE students to be disadvantaged. It is quite clear that a far greater proportion of the student respondents perceived PE students to be disadvantaged compared to the lecturer respondents. It was pointed out in 6.3.2.3 that students perceived the main disadvantages to be associated with over confidence and boredom. It is the researcher's contention that some lecturers fail to perceive that aspects of the Accounting I course fail to stimulate or extend the PE student and they do not recognise that boredom and over confidence may result.

Of particular importance was the finding that the majority of respondents from English universities believed PE students to be disadvantaged. It is the researcher's experience that lecturers from English universities tend to be critical of high school accounting and prefer their Accounting I students to have no prior exposure to the subject. This view is shared by Drysdale who was quoted in Chapter I. He wrote :

Departments of Accounting at universities are notorious in their condemnation of school accounting. To quote a professor from the Natal University "I would rather have students in Accounting I who have never done accounting before." (Appendix 1)

It is contended that this belief is held not so much because of the dangers of boredom and over confidence, but rather because accounting courses at English universities have tended to lay stress on theoretical aspects of accounting rather than on procedural or book-keeping matters, while the high school course generally favours book-keeping skills rather than insights into theoretical issues. The result has been that lecturers believe that PE students have incorrect perceptions of the subject which need to be rectified or eradicated before effective teaching and learning can take place at university.

The researcher disagrees with this viewpoint because research has indicated that in terms of the criteria which universities use to grade their students, PE students generally outperform NPE students in the first semester and in some cases, the first year of the Accounting I course. This would seem to indicate that the reservations ascribed to respondents from English universities are not warranted.

In summary, it would seem that the question of PE student disadvantage is of less significance to lecturers than is the question of PE student advantage.

7.2.3 Hypotheses 3

H_a^3 : The majority of accounting lecturers believe that PE students would score similar marks to NPE students in each of :

- An April test
- A mid-year examination
- A September test
- A year-end examination.

The data in Table 7.9 were gathered from Question 3 of Section B of the questionnaire. Questions regarding each test and examination contained 4 fixed alternative responses. The question required that respondents give their opinion as to which of PE or NPE students would score better on the particular test or examination (fixed alternative 1 and 2), whether students would score similar marks (fixed alternative 3) or whether the respondents had no opinion on the issue (fixed alternative 4).

Table 7.9 : Responses to Question 3, Section B

	APRIL				MID-YEAR				SEPTEMBER				YEAR-END			
	PE	NPE	SIM	NO OP	PE	NPE	SIM	NO OP	PE	NPE	SIM	NO OP	PE	NPE	SIM	NO OP
No.	161	7	9	16	122	5	48	18	65	14	95	19	58	14	106	15
%	83,4	3,6	4,7	8,3	63,2	2,6	24,9	9,3	33,7	7,3	49,2	9,8	30,1	7,3	54,9	7,8

Table 7.9 shows, for example, that 65 respondents believed that PE students would do better than NPE students on the September test.

7.2.3.1 Hypothesis 3 by Total Respondents

A large sample test for proportions tested:

$$H_0 : P \leq 0,5$$

$$H_a : P > 0,5$$

April

Test results : Z statistic = -12,5968 P-value \approx 1

H_0 cannot be rejected. The majority of respondents do not, therefore, believe that PE and NPE students would score similar marks. Examination of Table 7,9 shows that 83,4% of respondents believe that PE students would do better on the April test.

Mid-Year

Test results : Z statistic = -6,9822 P-value \approx 1

H_0 cannot be rejected. Findings and conclusions are the same as for the April test with 63,2% of respondents believing that PE students would do better on this examination.

September

Test results : Z statistic = -0,2159 P-value = 0,5871

H_0 cannot be rejected. While the hypothesis cannot be rejected it is clear from Table 7.9 that most respondents (49,2%) believed students would score similar marks.

Year-end

Test results : Z Statistic = 1,3676 P-value = 0,0853

H_0 cannot be rejected. Findings and conclusions are the same as for the September test with 54,9% of respondents believing that students would score similar marks.

Chi-square tests for independence of responses by university were carried out.

H_0 : Variables independent

H_a : Variables dependent

The Chi-square tests resulted in

April	: χ^2 statistic = 42,002	P-value = 0,4709
Mid-year	: χ^2 statistic = 50,983	P-value = 0,1612
September	: χ^2 statistic = 65,163	P-value = 0,0125
Year-end	: χ^2 statistic = 42,807	P-value = 0,4364

H_0 cannot be rejected for any of the tests or examinations. It can be concluded, therefore, that responses to Question 3 for all tests and examinations were independent of the university to which the respondent belonged.

7.2.3.2 Test for Independence by AC1Y/AC1N Status

Table 7.10 : Responses to Question 3 by AC1Y/AC1N Status

	April		Mid-year		September		Year-end	
	AC1Y	AC1N	AC1Y	AC1N	AC1Y	AC1N	AC1Y	AC1N
Similar	4	5	27	21	57	38	61	45
Different	102	82	79	66	49	49	45	42
PE Higher	92	69	69	53	34	31	31	27
NPE Higher	5	2	3	2	9	5	10	4
No Opinion	5	11	7	11	6	13	4	11

Chi-square tests of independence were carried out to determine whether responses were independent of whether or not respondents had taught at Accounting I level.

H_0 : Variables independent

H_a : Variables dependent

The Chi-square tests revealed :

April : χ^2 statistic = 0,4186 P-value = 0,5176

Mid-year : χ^2 statistic = 0,0455 P-value = 0,8311

September : χ^2 statistic = 1,9484 P-value = 0,1628

Year-end : χ^2 statistic = 0,6544 P-value = 0,4185

H_0 cannot be rejected for any of the tests or examinations. Thus responses were independent of whether or not respondents had teaching experience at Accounting I level.

7.2.3.3 Test for Independence by HSY/HSN Status

Table 7.11 : Responses to Question 3 by HSY/HSN Status

	April		Mid-year		September		Year-end	
	HSY	HSN	HSY	HSN	HSY	HSN	HSY	HSN
Similar	1	8	9	39	13	82	16	90
Different	29	155	21	124	17	81	14	73
PE Higher	29	132	20	102	16	49	14	44
NPE Higher	0	7	0	5	1	13	0	14
No Opinion	0	16	1	17	0	19	0	15

Chi-square tests for independence were carried out to determine whether responses were independent of whether or not respondents had high school teaching experience in accounting.

H_0 : Variables independent

H_a : Variables dependent

The Chi-square tests revealed :

April : χ^2 statistic = 0,1413 P-value = 0,7070

Mid-year : χ^2 statistic = 0,5002 P-value = 0,4794

September : χ^2 statistic = 0,4930 P-value = 0,4826

Year-end : χ^2 statistic = 0,0362 P-value = 0,8491

H_0 cannot be rejected for any of the tests or examinations. Thus responses were independent of whether or not respondents had high school teaching experience.

7.2.3.4 Test for Independence by LES5/MOR5 Status

Table 7.12 : Responses to Question 3 by LES5/MOR5 Status

	April		Mid-year		September		Year-end	
	LES5	MOR5	LES5	MOR5	LES5	MOR5	LES5	MOR5
Similar	3	6	25	23	43	52	48	58
Different	78	106	56	89	38	60	33	54
PE Higher	67	94	46	76	22	43	20	38
NPE Higher	3	4	2	3	7	7	5	9
No Opinion	8	8	8	10	9	10	8	7

Chi-square tests for independence were carried out to determine whether responses were independent of the extent of academic experience of respondents.

H_0 : Variables independent

H_a : Variables dependent

The Chi-square tests revealed :

April	:	χ^2 statistic = 0,2891	P-value = 0,5908
Mid-year	:	χ^2 statistic = 2,6836	P-value = 0,5014
September	:	χ^2 statistic = 0,8336	P-value = 0,3612
Year-end	:	χ^2 statistic = 1,0605	P-value = 0,3031

H_0 cannot be rejected for any of the tests or examinations. Thus responses were independent of whether respondents had academic experience of 5 and fewer years or 6 and more years.

7.2.3.5 Test for Independence by MATY/MATN Status

Table 7.13 : Responses to Question 3 by MATY/MATN Status

	April		Mid-year		September		Year-end	
	MATY	MATN	MATY	MATN	MATY	MATN	MATY	MATN
Similar	1	8	24	24	49	46	57	49
Different	113	71	90	55	65	33	57	30
PE Higher	104	57	81	41	50	15	44	14
NPE Higher	3	4	2	3	8	6	7	7
No Opinion	6	10	7	11	7	12	6	9

Chi-square tests for independence were carried out to determine whether responses were independent of whether or not respondents had

taken accounting as one of their matriculation subjects.

H_0 : Variables independent

H_a : Variables dependent

The Chi-square tests revealed :

April : χ^2 statistic = 8,9796 P-value = 0,008
 Mid-year : χ^2 statistic = 2,1726 P-value = 0,1405
 September : χ^2 statistic = 4,3393 P-value = 0,0372
 Year-end : χ^2 statistic = 2,7256 P-value = 0,0988

H_0 cannot be rejected for any of the tests or examinations. Thus responses were independent of whether respondents had themselves taken accounting at secondary level.

7.2.3.6 Hypothesis 3 by Language Orientation

Table 7.14 : Responses to Question 3 by Language Orientation

	April		Mid-year		September		Year-end	
	ENG	AFR	ENG	AFR	ENG	AFR	ENG	AFR
Similar	7	1	24	10	38	22	42	25
Different	66	53	49	44	35	32	31	29
PE Higher	52	52	34	43	14	30	12	26
NPE Higher	4	0	4	0	9	1	10	1
No Opinion	10	1	11	1	12	1	9	2

Chi-square tests for independence were carried out to determine whether responses were dependent upon the language orientation of the university to which the respondent belonged.

H_0 : Variables independent

H_a : Variables dependent

The Chi-square tests revealed :

April	: χ^2 statistic = 3,1481	P-value = 0,0760
Mid-year	: χ^2 statistic = 3,2641	P-value = 0,0708
September	: χ^2 statistic = 1,5942	P-value = 0,2067
Year-end	: χ^2 statistic = 1,5728	P-value = 0,2098

H_0 cannot be rejected for any of the tests or examinations. Responses were, therefore, independent of the language orientation of the university to which respondents belonged.

7.2.3.7 Hypothesis 3 : Discussion and Interpretation of Results

Analysis of responses to Question 3 indicates that the majority of respondents believe that PE students would score better marks on the April test and June examination than NPE students. Most respondents believed that students would score similar marks in the September and year-end examination. Of particular importance was that tests showed that opinions were, in all cases, independent of the category of respondent and also showed that responses were independent of the university to which respondents belonged. The independence of variables in all instances strengthens the findings for total respondents.

The fact that responses were independent of the category of respondent tends to suggest that the results of testing H_a^1 and particularly H_a^2 may have been misleading. Results of testing H_a^1 showed that while the majority of respondents believed PE students to be advantaged, responses were dependent on whether respondents had taught Accounting I or not and whether respondents had themselves taken accounting as a matriculation subject. Similarly testing H_a^2 revealed that the majority of respondents did not believe students to be disadvantaged but that the majority of respondents from English universities, MATN respondents and AC1Y respondents believed PE students to be disadvantaged. Thus conflicting opinions were expressed by different categories of respondent regarding H_a^1 and H_a^2 .

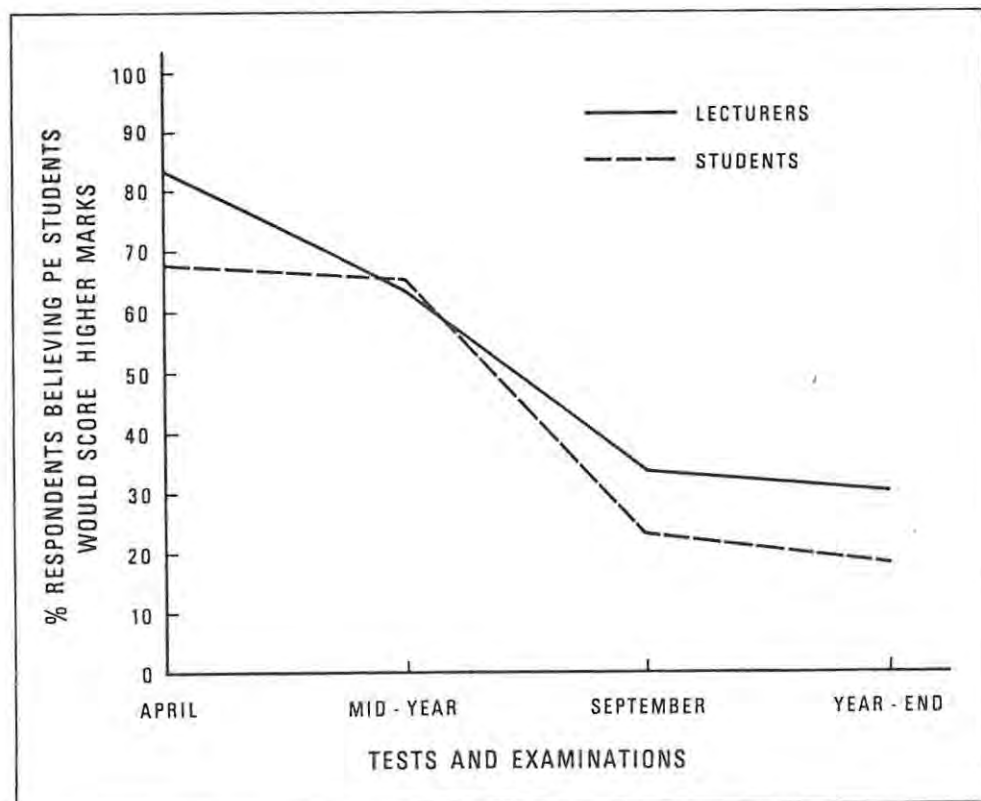
The lack of consistency amongst categories of respondent disappeared when testing H_a^3 . This suggests that when required to express an opinion about actual performance on tests and examinations, respondents opinions were independent of the category to which they belonged. The researcher believes the results of testing H_a^3 to be more reliable because Question 3 required that respondents consider an issue for which actual evidence is available rather than the abstract nature of Questions 1 and 2.

Although H_a^2 was not accepted, a comparatively high proportion of respondents expressed the opinion that PE students were disadvantaged. As was the case with the student survey, this opinion was not evident when testing H_a^3 , in that an insignificant proportion of respondents believed that NPE students would do better than PE

students (see Table 7.9).

It is quite clear that lecturers' opinions are very similar to students' opinions in that both groups believe PE students would score better in the April test and mid-year examination. The similarity in findings extend into the second semester of the Accounting I course in that both groups expressed the opinion that a significant proportion of PE students would continue to outperform their NPE classmates. Figure 7.1 shows the proportion of both groups of respondents who believed that PE students would score better marks than NPE students in the tests and examinations.

Figure 7.1 : Respondents Believing that PE Students would score better than NPE students



It is clear that students and lecturers' opinions regarding PE advantage, expressed in terms of comparative test and examination results, are very similar. It is interesting to note that lecturers were more positive about PE student advantage in the September test and year-end examination than students and to this extent their opinions support the findings of Schroeder (3) who found that student advantage continued throughout the first year (see 2.4). It should be noted that, as was the case with the student survey, lecturers opinions regarding PE advantage on tests and examinations, closely resembled the findings of the empirical study described in Chapter III.

7.2.4 Hypothesis 4

H_a⁴ : The majority of accounting lecturers believe that PE student advantage continues into the second year university financial accounting course.

It was pointed out in Chapter IV that this hypothesis could only be tested if Hypothesis 1 was accepted. Question 3 of Section B of the questionnaire contained three fixed response alternatives; "yes", "no" and "no opinion". This question was not to be answered by respondents who had answered in the negative to Question 1.

Table 7.15 : Responses to Question 4, Section B by University

University	Yes	No	No Opinion
Rhodes	1	6	0
Durban	4	7	2
PMB	3	4	2
Wits	1	15	1
UCT	1	8	6
Pretoria	10	12	2
Potch	3	6	0
UOFS	4	1	0
Stellenbosch	3	11	1
UPE	0	8	0
UNISA	11	22	4
Fort Hare	1	2	1
Unitra	2	3	1
Zululand	1	2	0
Westville	0	0	0
TOTAL	45	107	20
%	26,2	62,2	11,6

(1 respondent did not answer this question).

7.2.4.1 Hypothesis 4 by Total Respondents

A large sample test for proportions tested :

$$H_0 : P \leq 0,5$$

$$H_a : P > 0,5$$

Test results: Z statistic = -6,2524

P-value \approx 1

H_0 cannot be rejected. It is concluded, therefore, that the majority of lecturers do not believe PE student advantage to continue into the second year.

A Chi-square test for independence of responses by university was carried out.

H_0 : Variables independent

H_a : Variables dependent

The Chi-square test resulted in

$$\chi^2 \text{ statistic} = 40,756$$

$$P\text{-value} = 0,0328$$

H_0 cannot be rejected. It can be concluded that responses to Question 4 were independent of the university to which respondents belonged.

7.2.4.2 Hypothesis 4 by AC1Y/AC1N, HSY/HSN, LES5/MOR5, MATY/MATN

Table 7.16 : Responses to Question 4 by Variable

Answer	AC1Y	AC1N	HSY	HSN	LES5	MOR5	MATY	MATN
Yes	28	17	14	31	18	27	35	10
No	63	44	13	94	44	63	63	44
No opinion	5	15	2	18	12	8	10	10

A Chi-square test for independence was carried out to determine whether responses were independent of the category of respondent (variable).

H_0 : Variables independent

H_a : Variables dependent

The Chi-square test revealed :

AC1Y/AC1N

χ^2 statistic = 8,857

P-value = 0,0119

H_0 cannot be rejected. Thus responses were independent of whether or not respondents had teaching experience at Accounting I level.

HSY/HSN

χ^2 statistic = 8,885

P-value = 0,0118

H_0 cannot be rejected. Thus responses were independent of whether or not respondents had teaching experience at secondary level.

LES5/MOR5

χ^2 statistic = 2,677

P-value = 0,2622

H_0 cannot be rejected. Thus respondents answered Question 4 independently of the length of their academic experience.

MATY/MATN

χ^2 statistic = 6,428

P-value = 0,0402

H_0 cannot be rejected. Thus responses were independent of whether or not respondents had themselves taken accounting as a high school subject.

7.2.4.3 Hypothesis 4 by Language Orientation

Table 7.17 : Responses to Question 4 by Language Orientation

Answer	English	Afrikaans	Total
Yes	10	20	30
No	40	30	70
No Opinion	11	3	14
TOTAL	61	53	114

A Chi-square test for independence was carried out to determine whether responses were independent of language orientation.

H_0 : Variables independent

H_a : Variables dependent

The Chi-square test resulted in :

χ^2 statistic = 8,815

P-value = 0,0122

H_0 cannot be rejected. It can be concluded, therefore, that respondents answered Question 4 independently of the language orientation of the university to which they belonged.

7.2.4.4 Hypothesis 4 : Discussion and Interpretation of Results

The majority of lecturers clearly did not believe that PE student advantage continues into the second year. Responses to this question were independent of the category of lecturer.

This finding correlates with that of the previous section (Hypothesis 3) and also with the corresponding hypothesis for students. In view of the fact that most respondents expressed the opinion that PE student advantage would not be present in the September test and year-end examination, it is not surprising that they believe that PE student advantage would not continue into the second year. Despite the fact that Hypothesis 4 was rejected, it should be noted that 26,2% (Table 7.15) of respondents believe PE student advantage does continue into the second year. In view of the fact that responses were not dependent on the university to which respondents belonged, the researcher considers that the reason for the perceived advantage in second year is unlikely to be because topics are common to the school and second year syllabuses. Therefore it is concluded that these respondents hold this opinion because they consider advantages afforded by prior study to equip students with an understanding and familiarity with accounting techniques which affords them an advantage beyond Accounting I.

7.2.5 Hypothesis 5

H_a^5 : The majority of accounting lecturers believe that PE students consider themselves to be advantaged in the first year financial accounting course.

Data required for testing this hypothesis were gathered from Question 13, Section B of the questionnaire. The question allowed for three fixed alternative responses; "yes", "no" and "no opinion".

Table 7.18 : Responses to Question 13, Section B by University

University	Yes	No	No Opinion
Rhodes	6	0	1
Durban	12	0	5
PMB	7	0	2
Wits	16	0	3
UCT	14	0	7
Pretoria	23	0	1
Potch	9	0	0
UOFS	5	0	0
Stellenbosch	15	0	1
UPE	7	1	0
UNISA	33	3	2
Fort Hare	1	0	3
Unitra	9	0	2
Zululand	2	0	2
Westville	1	0	0
TOTAL	160	5	28
%	82,9	2,6	14,5

7.2.5.1 Hypothesis 5 by Total Respondents

A large sample test for proportions tested :

$$H_0 : P \leq 0,5$$

$$H_a : P > 0,5$$

Test results : Z statistic = 9,1417 P-value = 0,0000

H_0 is rejected. It is concluded, therefore, that the majority of respondents believe that PE students consider themselves to be advantaged in the first year financial accounting course.

A Chi-square test for independence of responses by university was carried out.

H_0 : Variables independent

H_a : Variables dependent

The Chi-square test resulted in

$$\chi^2 \text{ statistic} = 46,972$$

$$P\text{-value} = 0,0138$$

H_0 cannot be rejected. It can be concluded that responses to Question 13 were independent of the university to which respondents belonged.

7.2.5.2 Hypothesis 5 by AC1Y/AC1N, HSY/HSN, LES5/MOR5, MATY/MATN

Table 7.19 : Responses to Question 13 by Variable

Answer	AC1Y	AC1N	HSY	HSN	LES5	MOR5	MATY	MATN
Yes	90	70	24	136	68	92	102	58
No	5	0	2	3	2	3	3	2
No opinion	11	17	4	24	11	17	9	19

A Chi-square test for independence was carried out to determine whether responses were independent of the category of respondent (variable).

H_0 : Variables independent

H_a : Variables dependent

The Chi-square test revealed :

AC1Y/AC1N

χ^2 statistic = 6,983

P-value = 0,0305

H_0 cannot be rejected. It can be concluded, therefore, that respondents answered Question 13 independently of whether or not they had taught at Accounting I level.

HSY/HSN

χ^2 statistic = 2,348

P-value = 0,3092

H_0 cannot be rejected. It can be concluded, therefore, that respondents answered Question 13 independently of whether or not they had taught accounting at high school level.

LES5/MOR5

χ^2 statistic = 0,109

P-value = 0,9468

H_0 cannot be rejected. It can be concluded, therefore, that respondents answered Question 13 independently of the length of their academic experience.

MATY/MATN

χ^2 statistic = 9,848

P-value = 0,0073

H_0 cannot be rejected. It can be concluded, therefore, that respondents answered Question 13 independently of whether or not they had taken accounting at high school themselves.

7.2.5.3 Hypothesis 5 by Language Orientation

Table 7.20 : Responses to Question 13 by Language Orientation

Answer	English	Afrikaans	Total
Yes	55	52	107
No	0	0	0
No Opinion	18	2	20
TOTAL	73	54	127

A Chi-square test for independence was carried out to determine whether responses were independent of language orientation.

H_0 : Variables independent

H_a : Variables dependent

The Chi-square test resulted in :

$$\chi^2 \text{ statistic} = 10,271$$

$$P\text{-value} = 0,0014$$

H_0 is rejected. Thus responses were dependent on the language orientation of the university to which respondents belonged. Examination of Table 7.20 reveals, however, that the majority of respondents from both English and Afrikaans orientated universities believed hypothesis 5 to be true. None of the respondents believed the hypothesis to be false, but more respondents from English universities held "no opinion" than respondents from Afrikaans universities. It is clear, therefore, that respondents who held an opinion did so independently of the language orientation of their universities.

7.2.5.4 Hypothesis 5 : Discussion and Interpretation of Results

The majority of respondents believed that PE students consider themselves to be advantaged in the first year financial accounting course. This opinion is held independently of the category into which respondents fall and independently of the language orientation of the universities.

Further discussion and interpretation of the results of testing hypothesis 5 will be included in the corresponding section for hypothesis 6 (7.2.6.4).

7.2.6 Hypothesis 6

H_a^6 : The majority of accounting lecturers believe that NPE students have an advantage in the first year university financial accounting course.

Data required for testing this hypothesis was gathered from Question 14, Section B of the questionnaire. The question allowed for three fixed alternative responses; "yes", "no" and "no opinion".

Table 7.21 : Responses to Question 14, Section B by University

University	Yes	No	No Opinion
Rhodes	7	0	0
Durban	11	2	4
PMB	6	1	2
Wits	13	4	2
UCT	9	2	10
Pretoria	23	0	1
Potch	8	0	1
UOFS	4	0	0
Stellenbosch	15	0	1
UPE	7	1	0
UNISA	31	2	5
Fort Hare	1	0	3
Unitra	8	1	2
Zululand	2	0	2
Westville	1	0	0
TOTAL	146	13	33
%	76,0	6,8	17,2

(1 respondent did not answer this question)

7.2.6.1 Hypothesis 6 by Total Respondents

A large sample test for proportions tested:

$$H_0 : P \leq 0,5 \qquad H_a : P > 0,5$$

$$\text{Test results : } Z \text{ statistic} = 7,2169 \qquad P\text{-value} = 0,0000$$

H_0 is rejected. It is concluded, therefore, that the majority of respondents believe that NPE students consider that PE students have an advantage in the first year financial accounting course.

A Chi-square test for independence of responses by university was carried out.

$$H_0 : \text{Variables independent} \qquad H_a : \text{Variables dependent}$$

The Chi-square test resulted in:

$$\chi^2 \text{ statistic} = 50,817 \qquad P\text{-value} = 0,0052$$

H_0 cannot be rejected. Thus responses to Question 14 were independent of the university to which respondents belonged. It should be noted that with the exception of UCT the majority of respondents answered yes to Question 14. In the case of UCT a high proportion of respondents indicated that they had no opinion on the issue.

7.2.6.2 Hypothesis 6 by AC1Y/AC1N, HSY/HSN, LES5/MOR5, MATY/MATN

Table 7.22 : Responses to Question 14 by Variable

Answer	AC1Y	AC1N	HSY	HSN	LES5	MOR5	MATY	MATN
Yes	84	62	26	120	58	88	98	48
No	5	8	0	13	9	4	4	9
No opinion	16	17	4	29	13	20	11	22

Chi-square tests for independence were carried out to determine whether responses were independent of the category of respondent (variable).

H_0 : Variables independent

H_a : Variables dependent

The Chi-square tests revealed :

AC1Y/AC1N

χ^2 statistic = 2,371

P-value = 0,3056

H_0 cannot be rejected. It can be concluded, therefore, that respondents answered Question 14 independently of whether or not they had teaching experience at Accounting I level.

HSY/HSN

χ^2 statistic = 3,243

P-value = 0,1976

H_0 cannot be rejected. It can be concluded, therefore, that respondents answered Question 14 independently of whether or not they had teaching experience at high school level.

LES5/MOR5

χ^2 statistic = 4,360

P-value = 0,1130

H_0 cannot be rejected. It can be concluded, therefore, that respondents answered Question 14 independently of the extent of their academic experience.

MATY/MATN

χ^2 statistic = 17,233

P-value = 0,0002

H_0 is rejected. Thus responses to Question 14 were dependent on whether respondents had themselves taken accounting at high school. Examination of Table 7.22 shows that 86,7% of MATY respondents believed that NPE students consider that PE students are advantaged, while the corresponding figure for MATN respondents is 60,8%. MATN respondents were, of course, NPE students themselves and it can be argued, therefore, that their responses to this question would be more reliable than those of the MATY respondents. It is significant that while 60,8% of MATN respondents answered "yes" to Question 14, only 11,4% answered "no", with the remaining 27,8% having no opinion on the issue.

It can be concluded, therefore, that despite the fact that responses to Question 14 were dependent on whether respondents had taken accounting at high school, the majority of both groups believed that NPE students consider PE students to be advantaged in Accounting I.

7.2.6.3 Hypothesis 6 by Language Orientation

Table 7.23 : Responses to Question 14 by Language Orientation

Answer	English	Afrikaans	Total
Yes	46	50	96
No	9	0	9
No Opinion	18	3	21
TOTAL	73	53	126

A Chi-square test for independence was carried out to determine whether responses were independent of language orientation.

H_0 : Variables independent

H_a : Variables dependent

The Chi-square test resulted in :

χ^2 statistic = 17,138

P-value = 0,0002

H_0 is rejected. It is concluded, therefore, that responses to Question 14 were dependent on the language orientation of the university to which respondents belonged. Examination of Table 7.23 shows that 63,0% of respondents from English universities and 94,3% of respondents from Afrikaans universities answered "yes" to Question 14. The corresponding figures for respondents with no opinion were 24,7% and 5,7%. It is clear that respondents from Afrikaans universities believe that NPE students consider PE students to be advantaged, to a greater extent than do their counterparts from English universities.

It is significant that the majority of both categories of respondents believed that NPE students consider PE students to be advantaged.

7.2.6.4 Hypothesis 6 : Discussion and Interpretation of Results

The majority of respondents believed that NPE students consider that PE students have an advantage in Accounting I. This opinion is held independently of the category of respondent except in the case of MATY/MATN and language orientation of respondents' universities. In the two cases where opinions were dependent on category of respondent the majority of respondents from each category nevertheless believed that NPE students consider PE students to be advantaged. It is clear from testing both Hypotheses 5 and 6 that the majority of all categories of respondents believed that respondents, both PE and NPE, consider PE students to be advantaged. It was established in Chapter VI that students believed PE students to be advantaged and testing Hypotheses 5 and 6 has shown that lecturers perceive their students' opinions regarding this issue correctly.

Thus lecturers and students have substantially the same opinions regarding PE student advantage and lecturers are aware of this fact.

The researcher believes that this factor lends weight to the contention made repeatedly in this thesis, that the Accounting I course should be structured in the manner which recognises PE student advantage. The strategies available to the lecturer have already been discussed at length and will not be repeated except to reiterate that students should, at the very least, be counselled in order that they use their prior exposure to accounting to their best advantage.

7.3 Conclusion

This chapter describes the testing of 6 hypotheses, each of which has provided information about lecturers' attitudes regarding high school study of accounting. Tests have shown that the majority of respondents believe that :

- (i) high school accounting provides the student with an advantage in Accounting I.
- (ii) high school accounting does not result in disadvantages for PE students in Accounting I.
- (iii) PE students would score higher marks than NPE students on the April test and mid-year examination but that PE and NPE students would score similar marks in the September test and year-end examination.
- (iv) PE student advantage does not continue into the second year of university study.
- (v) PE students consider themselves to be advantaged in Accounting I.
- (vi) NPE students consider PE students to be advantaged in Accounting I.

The majority of respondents believe PE students to be advantaged because of their prior exposure to the subject. This conclusion is drawn from direct questioning and also from opinions regarding performance on tests and examinations. Respondents believed that this advantage is present in the first semester of Accounting I and that it does not continue into the second semester nor into the second year of study.

Respondents opinions regarding disadvantages arising from prior study were divided. The majority of all respondents believed there to be no disadvantages but the majority of AC1Y, MATN and respondents from English universities felt the opposite to be true. It is significant that the majority of respondents believed that disadvantages would not be manifested in lower test or examination results.

It should be noted that the findings for hypotheses 1 - 4 for both students and lecturers are almost identical. It is clear that students and their lecturers believe PE students to be advantaged. The similarity of their views on performance in examinations and tests is remarkable, especially because their opinions in this regard are so similar to the findings of the empirical study described in Chapter III.

Discussion of the implications of these findings will be confined to

- curriculum innovation in Accounting I
- difference in opinions of respondents from English orientated and Afrikaans orientated universities.

7.3.1 Accounting I : Curriculum Innovation

Mention was made in 6.4.2 of curriculum evaluation methods and particularly of the illuminative approach to evaluation. In this regard the opinions of lecturers regarding prior study of accounting should be invaluable to those responsible for evaluation of the Accounting I curriculum. In addition to the information already forthcoming from this chapter, lecturers' views regarding possible methods of structuring the Accounting I course were surveyed.

7.3.1.2 Lecturers' Opinions Regarding the Accounting I Curriculum

Question 5 of Section B of the questionnaire required respondents to indicate their opinion, on a scale of 1 - 5, of a number of ways of organising the first year accounting course.

Seven different options were provided. Respondents considered these independently of one another, and were requested to rate their potential benefit according to the following scale :

- 1 = Highly detrimental
- 2 = Detrimental
- 3 = Neutral
- 4 = Beneficial
- 5 = Highly beneficial.

The different options were as follows:

1. A pre-semester course for NPE students which would enable them to 'catch up' to those students who have done accountancy at school.
2. A different set of lectures and assignments for PE students, designed to avoid repetition of work done at school, and a beginner course for NPE students.
3. School accountancy as a pre-requisite for university accounting.
4. No school accountancy as a pre-requisite for university accounting.
5. The same lectures for all students but different assignments for the two groups.

6. Extra lectures for NPE students.
7. The same course for all students, based on the assumption that no student has any knowledge of accounting.

Table 7.24 : Opinions Regarding Accounting I Curriculum by Total Respondents (No. of Respondents)

	H.DETRI.	DETRI.	NEUTRAL	BENEF.	H.BENEF.
Option 1	1	8	26	91	64
2	7	38	36	69	41
3	72	29	21	34	36
4	118	32	34	3	3
5	20	58	48	57	8
6	7	28	34	92	30
7	30	62	47	36	16

(Some respondents did not answer Question 6).

From the above table it is possible to rank the options in terms of how beneficial lecturers considered them to be. In descending order of popularity, they are ranked as follows:

1, 6, 2, 3, 5, 7, 4.

Options 1 and 6 are clearly the most favoured. 81,5% of respondents felt that a pre-semester course for NPE students would be beneficial or highly so and 63,9% of respondents felt that extra lectures for NPE students would be beneficial or highly so. Options which involved entry requirements for Accounting I were unpopular, especially that which required students not to have taken accounting at high school. Of particular interest was that only 27,2% of respondents believed that the same course for all students was beneficial or highly so. This contrasts with students' opinions (See 6.4.2.1) where 50% of respondents thought the same course for all students to be desirable.

A comparison of lecturers and students' opinions regarding Accounting I course options revealed that with the exception of option 7 the two groups have very similar views.

Lecturers' ranking of options : 1 6 2 3 5 7 4

Students' ranking of options : 1 6 7 2 5 3 4

In view of the fact that many of the universities offer a common Accounting I course for all students, it is extremely surprising that a relatively small proportion of lecturers favoured this option. This will be discussed in more detail in 7.3.2 below.

It has already been pointed out that the researcher believes that the Accounting I course should be structured in a manner which takes into account the background of students. This contention is supported by the opinions of lecturers who clearly favour options which

differentiate between PE and NPE students. Some universities have already introduced curricula which do so and it is suggested that the only way that this problem can be addressed effectively is by experimenting with Accounting I course design. A course which does not cater for the two groups of students is clearly favoured by neither lecturers nor students, so alternative strategies must be devised and implemented. Curriculum innovation is an on-going exercise and undoubtedly modifications and changes will continue to be made as those responsible for the course react to changing circumstances and the changing needs of students.

7.3.2 Language Orientation : Difference in Opinions

Analysis of responses by lecturers to Question 5 has clearly indicated that lecturers from English orientated universities responded differently to their Afrikaans colleagues. Table 7.25 illustrates the difference in response patterns.

Table 7.25 : Responses by Language Orientation
(% of Language Group Total)

ISSUE	ENGLISH	AFRIKAANS
1. PE Students advantaged (Hypothesis 1)	71,2	100,0
2. PE Students disadvantaged (Hypothesis 2)	53,4	37,7
3. PE Student would do better (Hypothesis 3)		
April	71,2	96,3
Mid-year	46,6	79,6
September	19,2	55,5
Year-end	16,4	48,1
4. PE Student advantage into 2nd year (Hypothesis 4)	16,4	37,7
5. Believe PE consider themselves advantaged (Hypothesis 5)	75,3	96,3
6. Believe NPE consider PE to be advantaged (Hypothesis 6)	63,0	94,3

It is quite clear from Table 7.25 that a far greater proportion of lecturers at Afrikaans universities believed PE students to be advantaged and believe students to be aware of this fact. A smaller proportion of lecturers from Afrikaans universities believe PE students to be disadvantaged.

It has been pointed out that 83,3% of respondents from Afrikaans universities had taken accounting as a high school subject while the corresponding figure for respondents from English universities was

27,4% (Table 7.5). The relationship between personal experience of studying accounting at high school and subsequent recognition of PE student advantage is a topic which should be researched further.

In view of the opinions held by Afrikaans lecturers it is not surprising that curriculum innovation that has taken place in South Africa, has tended to take place in Afrikaans universities. It was considered essential, therefore, to ascertain whether English and Afrikaans academics held different opinions regarding the curriculum options identified in 7.3.1.2. Table 7.26 shows responses by language orientation to Question 5 of the questionnaire.

Table 7.26 : Opinions Regarding Accounting I Curriculum by Language Orientation (No. of Respondents)

	H.DETR		DETR		NEUTRAL		BENEF		H.BENEF	
	ENG	AFR	ENG	AFR	ENG	AFR	ENG	AFR	ENG	AFR
Option 1	0	1	5	2	14	2	38	24	14	24
2	6	0	18	9	22	4	20	21	5	20
3	48	5	12	6	9	3	3	18	0	22
4	37	48	9	5	20	1	3	0	3	0
5	9	6	21	25	20	8	21	12	1	3
6	3	2	11	11	16	8	28	26	14	7
7	0	22	18	23	28	2	15	7	11	0

From the above table it is possible to rank the options in terms of how beneficial the two groups of lecturers considered them to be. In descending order of popularity they are as follows:

English lecturers	:	1	6	7	2	5	4	3
Afrikaans lecturers	:	1	2	3	6	5	7	4

The main difference in opinion between the two groups concerns options 7 and 3. 36% of respondents from English universities favour a common course for all students while only 13% of Afrikaans respondents favour this option. The most significant difference concerns option 3 where 74% of Afrikaans respondents regard school accounting as a pre-requisite for the Accounting I course as beneficial or highly so. The corresponding figure for English respondents is 4%.

It is quite clear that respondents from English and Afrikaans universities differ substantially on possible Accounting I course strategies. It should be noted, however, that the most favoured options for both groups (Afrikaans - 1 and 2; English - 1 and 6;) are course designs which cater for differences in students' backgrounds.

The analysis of Table 7.26 provides further explanation of why the curriculum innovations that have taken place tend to have been at Afrikaans universities. The fact that only 36% of English lecturers believe a common course to be beneficial or highly so, fails to

explain why the Accounting I course has not been modified at more English universities.

It is beyond the scope of this study to ascertain the reasons for this difference in attitude.

CHAPTER VII

REFERENCES AND NOTES

1. Where the response received from Westville does not coincide with other responses the researcher will not comment on this because of the uncertainty regarding the representativeness of this response.

2. These hypotheses were tested using Chi-square tests for independence. The level of significance for each Chi-square test was reduced by dividing the nominal level of significance by the number of individual Chi-square tests performed to ensure that the overall level of significance was not higher than 5% i.e. the tests are significant if $P\text{-value} < 0,0021$.
Miller, R. 1981 Simultaneous Inference, 2nd Edition New York: Springer.

3. Schroeder, N.W. Previous Accounting Education and College-Level Accounting Exam Performance, Issues in Accounting Education, Spring 1986.

CHAPTER VIII

RECOMMENDATIONS AND CONCLUSION

8.1 Research Findings

The findings of this study have shown, inter alia, that :

- (i) students with prior exposure to accounting have an advantage in the first year university financial accounting course.
- (ii) students believe that students with prior exposure to accounting have an advantage in the first year financial accounting course.
- (iii) lecturers believe that students with prior exposure to accounting have an advantage in the first year financial accounting course.

Clearly the findings of all three aspects of the study have been consistent with one another. The findings have also been consistent with those of similar studies carried out overseas. The researcher believes that these factors strengthen the findings of this study.

It was pointed out in Chapter I that restriction of the populations, in the case of the empirical study of student performance and in the survey of student opinion, resulted in the findings of these two studies applying only to the groups tested. This limitation did not

apply to the findings of the lecturer survey with findings in this case being applicable to all lecturers of accounting in South Africa.

The fact that lecturers at all universities believe PE students to be advantaged suggests that findings regarding PE student performance and students opinions, may apply to universities other than those tested. There is a need for further research in this area.

8.2 Implications of Research Findings

The findings of this study clearly require that the following issues be addressed.

- (i) The most appropriate level to begin the formal education of accountants.
- (ii) The policy of university departments of accounting regarding a first year intake which includes students with and without prior exposure to accounting.

8.2.1 The Most Appropriate Level

Many educators believe that the most appropriate level for the introduction of accounting is at first year university level while others believe that introduction to accounting at high school is desirable.

Swanson (1) believes that students who do well in the first year university course are more likely to choose accounting as a major

subject for their degrees. This may, in turn, influence a student's decision to become a professional accountant. In view of the fact that this and other studies have shown PE students to be at an advantage in the first year university course, the researcher agrees with Swanson's contention that

... the accounting profession should be interested in high school bookkeeping as a recruiting tool. (2)

The researcher does not, however, believe that this would be desirable. Choice of subject at high school level should, ideally, be based upon factors other than intended career. If intended career was to become a determinant of subject choice this would imply that school pupils would be forced to make career decisions at the age of 14 to 15 years (Standard 7). The factors which should influence subject choice at high school level have been discussed in Chapter VI of this thesis.

As long as accounting is offered at high school level, and the researcher has indicated that he considers that it should be (Chapter VI), some pupils will choose the subject and some of these will enter the first year university accounting course. This will mean that the accounting course will include both students with and without prior exposure to the subject.

8.2.2 Policy - Departments of Accounting

University educators currently confronted with the problem of a first year class including students with and without prior exposure to

accounting, have two courses of action available to them. Firstly, they could rule that only students with prior exposure are eligible for entry into the course, or that only students without prior exposure are eligible. Secondly, they could accept that the class will be comprised of both categories of student and take steps to structure the course in an appropriate manner.

- (i) Exclusion of either PE or NPE students. This is an option favoured by some accounting lecturers (see Chapter VII) but which the researcher considers to be unacceptable. Accounting at high school level has the potential to be an appropriate vehicle for education at that level and therefore pupils should not be excluded from choosing this subject by virtue of their career intentions. Similarly students should not be encouraged to opt for accounting at high school just because they intend to study the subject at tertiary level.
- (ii) Accounting I course structure. The researcher believes that this and other research have provided unequivocal support for the contention that the course should be structured in a manner which takes into account the different backgrounds of students. Various ways of structuring the Accounting I course to cater for both PE and NPE students, have been discussed at length earlier in this thesis.

Not only should attention be paid to structuring the Accounting I course appropriately, but university educators should also take steps to improve the high school course. The researcher agrees with

Swanson's statement :

In general, this study supports broad efforts to enhance the high school bookkeeping/accounting course as a preparation for entry into colleges of business.
(3)

If such steps were taken the advantage enjoyed by PE students would be enhanced and the general educational value of the high school course would be improved. The researcher recommends, therefore, that university educators develop a close relationship with high school educators so that they may better understand the high school course and contribute towards its development.

8.3 Conclusion

On-going development of any curriculum is essential if it is to remain relevant and effective. This is particularly true of accounting where the professional nature of the subject demands relevance and where the shortage of qualified and skilled accountants demands that education be effective and efficient. Optimal development of the curriculum is only possible if those responsible for the development understand the circumstances in which the curriculum functions. This thesis is a contribution towards that understanding.

CHAPTER VIII

REFERENCES AND NOTES

1. Swanson, G.A. and Brooks, L. High School Bookkeeping/Accounting and Success in College Accounting, The Balance Sheet, Nov/Dec 1984.
2. ibid., page 33.
3. ibid., page 33.

APPENDICES

APPENDIX 1

6 May 1987

The Chairman
National Council of Chartered Accountants
P O Box 964
JOHANNESBURG
2000

Dear Sir

I would like to draw your attention to the following potential developments that may have an adverse affect on the accounting profession in the future.

1. The joint matriculation board is at present considering making all so-called group F subjects (of which Accounting is one), non-exemption subjects.
2. They are considering this, I understand, in the light of representations from the universities who feel that the current exemption level is not difficult enough.
3. Departments of Accounting at universities are notorious in their condemnation of school accounting. To quote a professor from the Natal University "I would rather have students in accounts I ~~who~~ have never done accounting before".
I feel that this attitude has assisted the pressure on the joint matriculation board and yet, to my knowledge, no Accounts department, at any University, has ever conducted an unbiased study as to whether Accounting at school is detrimental or the opposite to students going Accounting at University.
4. One thing is certain, if Accounting at school is to be a non-exemption subject, then the cream of our pupils will not choose it, this will result in an under exposure of the subject and a channelling of top pupils away from the profession at university level.
5. Teachers of the subject at school level are not going to be happy teaching a subject that has been relegated to "the back seat" so to speak. This will result in good teachers who have achieved top results, and seen their pupils go on to achieve outstanding results in the subject at university level, no longer being available to the profession.

Looking forward to your comments.

Yours faithfully

.....
R B DRYSDALE
Head of Department

Howick High School
NATAL

MEMORANDUM

Aan: Die Sekretaris
GEMEENSKAPLIKE MATRIKULASIERAAD

Van: Prof JA Cilliers
Hoofmoderator
REKENINGKUNDE HG

Insake hersiene vakgroepe en slaagvereistes
(Verwys na verslag van GMR Werkskomitee, Julie 1984,
par 5.6, GMR Raadsvergadering van Jan. 1985 en RGN
Verslag WS-32/1985)

Ek het met ontsteltenis kennis geneem van die aanbeveling dat Groep F-vakke, waaronder Rekeningkunde en Bedryfseconomie, nie meer erken word as een van die drie Hoërgraad vakke vir U. versiteitstoelating nie en rig hiermee 'n ernstige versoek dat die aanbeveling heroorweeg word (a) nadat die voorspellingswaarde van die onderskeie Groep F-vakke, spesifiek van Rekeningkunde in die konteks van die handels- en rekenmeesters-studierigtings, vergeleke met die onderskeie Groep E-vakke, deur die RGN en/of die werkskomitee ondersoek is; en (b) nadat die betrokke vakkomitees van die onderwysdepartemente geraadpleeg is.

Motivering

1. Nadat enkele jare gelede (ongeveer 1975) spesifiek vertoë gerig is aan die GMR vir die erkenning van REKENINGKUNDE HG as 'n matrikulasievak onder Groep E het die GMR besluit om Rekeningkunde HG onder Reglement M3(f) spesifiek uit Groep F as een van die drie vereiste Hoër Graad vakke, op gelyke voet met vakke uit Groep E, erken kan word mits Wiskunde op minstens die Standaardgraad geslaag is (Kyk na Reglement M3(f)(viii) in GMR HANDBOEK van 1978).

Hierdie vertoë is deur my aan die GMR gerig nadat ek as universiteitsvertegenwoordiger gedien het op die kernsillabus-hersieningskomitee van 1972 en gesoek het na universiteitserkenning van die veranderde inhoud en klem van die vak wat onder die nuwe kernsillabus wesenlik verskil het van sy voorganger wat as BOEKHOU bekend gestaan het.

2. Nadat verskeie universiteite vertrouwd geraak het met die vernuwing in die matrieksillabus vanaf 1977, asook van die peil van eksaminering, het sommige van hulle na plaaslike ondersoeke na maniere om die slaagsyfer in Rekeningkunde I te verbeter, besluit om matriekrekeningkunde óf as voorvereiste te stel vir toelating tot Rekeningkunde I óf as sterk aanbeveling te stel (Kyk na Fakulteitsvereistes vir toelating tot B.Comm van Universiteite Potchefstroom, UNISA en Witwatersrand).

3. By die jongste hersiening van die kernsillabus vir Rekeningkunde wat in 1987 op matriekvlak implementeer word, het die vak volle erkenning geniet as vrystellingsvak met drie

universiteitsverteenwoordigers op die kernsillabuskomitee en is die behoeftes van beide die universiteite en die rekenmeestersprofessie in die hersiene sillabus opgeneem. Onder hierdie nuwe kernsillabus word in die hoër graad baie meer as in die ou sillabus klem gelê op die ontwikkeling en toetsing van insig.

4. Die RGN-Onderzoek (Verslag WS-32/1985) het aangetoon dat Groep F-vakke 'n voorspellingswaarde het vir sukses in die B.Com.-rigting (kyk p 52, 56, 59). Die RGN-onderzoek het na my waarneming nie aangetoon dat Groep E-vakke 'n beter voorspellingswaarde vir sukses in die B.Com. -rigting het as Groep F-vakke nie. Verder het die onderzoek hoegenaamd nie gekyk na die voorspellingswaarde van Rekeningkunde HG gekoppel met Wiskunde SG (die status quo) nie. Hier is dus nie genoeg gronde om die bestaande matrikulasievystellingsstatus van die vak REKENINGKUNDE te ontnem nie.

5. Indien die aanbeveling aanvaar sou word, is die logiese uitvloeisel dat skoolhoofde sou aanbeveel dat Groep F-vakke net op Standaardgraad geneem hoef te word en dat Rekeningkunde, wat die grondslag is vir een van die erkende hoër beroepe, naamlik van Rekenmeester/Duditeur, op skool verdoem word tot die kategorie van 'n beroepsvak vir die 'dom-normale' leerling terwyl dit in die huidige tydvak in ons land tén grondslag lê van ons ekonomiese ontwikkeling.

6. Die vakinspekteurs van Rekeningkunde van die onderskeie onderwysdepartemente het totdusver na my wete nog nie amptelik kennis geneem van die voorstelle wat hulle in hulle beplanning en voorligting aan leerlinge en ouers ingrypend kan raak.



PROF JA CILLIERS

11 DESEMBER 1985

MEMORANDUM

INSAKE STATUS VAN REKENINGKUNDE AS MATRIKULASIE-VRYSTELLINGSVAK

opgestel deur

PROF J.A. CILLIERS

HOOF MODERATOR VIR REKENINGKUNDE (HOËR GRAAD)

1. INLEIDING

Die doel van die memorandum is om die aandag te vestig op die implikasies van die jongste hersiene vakgroepeerings en slaagvereistes van die Gemeenskaplike Matrikulasieraad vir die Matrikulasie-eksamen en vir die erkenning van REKENINGKUNDE as 'n skoolvak vir universiteitstoelating, spesifiek in die kommersiële studierigting.

2. DIE NUWE BEOOGDE UNIVERSITEITSTOELATINGSVEREISTES

Ten einde universiteitstoelating te verwerf moet 'n kandidaat:

- a. slaag in drie verpligte HG-vakke, met 'n minimum-totaal van 600 punte en 'n minimum van 160 punte per vak; nl.
 - a-1 die Eerste Taal; en
 - a-2 twee verdere HG-vakke gekies uit twee van die volgende Groepe:
 - Groep B: Wiskunde
 - Groep C: Biologie, Natuur-en Skeikunde
 - Groep D: Ander tale as Eerste Taal
 - Groep E: Aardrykskunde, Geskiedenis, Bybelkunde, Ekonomie
 (Let op dat Groep F vakke op Hoër Graad soos REKENINGKUNDE, BEDRYFSEKONOMIE, HUISHOUDKUNDE, MUSIEK, LANDBOUKUNDE, TEGNIESE TEKENE en KUNS hierby uitgesluit is)
- b. die Tweede Amptelike Taal op HG of SG ;
- c. nog Twee KEUSEVAKKE op HG of SG gekies uit Groepe A-F. ('n Belangrike insentief om Rekeningkunde op Hoër Graad te neem word die kandidaat hiermee ontnem).

3. HISTORIESE PERSPEKTIEF

3.1 DIE POSISIE Vóór 1977

- Slegs die amptelike landstale: Afrikaans, Engels, Duits en Bantoetale was ingedeel in Hoër en Laer Graad vakke.
- Die vakke was ingedeel onder vyf groepe: Groepe I - V.
- Groep IV het Wiskunde, Aardrykskunde, Geskiedenis, Bybelkunde en 'n Bantoetaal op Laer Graad bevat.
- Groep V het o.a. Bedryfseconomie, Rekeningkunde, en 'n kombinasievak Rekeningkunde en Handelwinskunde bevat.
- Ekonomie het nog nie bestaan as 'n erkende matrikulasievak nie.
- 'n Kandidaat moes in minstens vyf vakke gelyktydig slaag het.
- 'n Minimum van 40% is vereis in elk van vier vakke, een gekies uit elk van Groepe I - IV.

3.2 DIE POSISIE VANAF 1977

- Die matriekulasievakke is hergroepeer in Hoër Graad en Standaard Graad vakke in vyf groepe:
 - Groep A: Afrikaans en Engels, slegs Hoër Graad
 - Groep B: Wiskunde, HG en SG
 - Groep C: Wetenskap: Biologie en Natuur- en Skeikunde HG en SG
 - Groep D: Ander tale HG en SG
 - Groep E: Aardrykskunde, Bybelkunde, Ekonomie, Geskiedenis, Kuns en Musiek, HG en SG
(Kuns en Musiek is later verskuif na Groep F)
 - Groep F: Sluit onder andere die volgende vakke in op HG en SG: Huishoudkunde, Landboukunde en Rekeningkunde.
- Minstens drie vakke moes op Hoër Graad geslaag word:
 - Een amptelike Eerste Taal;
 - Die ander Twee uit twee van Groepe B - E en Rekeningkunde uit Groep F, met die voorbehoud dat 'n kandidaat wat Rekeningkunde HG neem Wiskunde minstens op die Standaardgraad moes slaag.
(Die vergunning t.o.v. Rekeningkunde is toegestaan nadat geslaagde vertoë in hier voege tot die GMR gerig was op grond van die vernuwing wat in die nuwe kernsillabus vir die vak aangebring was).

3.3 Die RGN Onderzoek na differensiële toelatingsvereistes tot tersiëre-onderwysinrigtings, Verslag WS-32/1985

In hierdie ondersoek is gekyk na die suksesvoorspellingswaarde van die individuele vakke in Groepe A-D: Afrikaans, Engels, Wiskunde, Biologie, Natuur- en Skeikunde en 'n Derde Taal.

Daar is egter nie gekyk na die voorspellingswaarde van individuele vakke in Groep E en Groep F nie. Hierdie Groepe is as 'n geheel beskou ten opsigte van hulle algemene voorspellings waarde vir sukses in verskillende graadrigtings.

Wat die graadrigtings betref is die B.COM graad as 'n algemene studierigting beskou maar is daar nie o.a. spesifiek aandag gegee aan die voorspellingswaarde van Wiskunde, Biologie en Taal relatief tot prestasies in Rekeningkunde en Ekonomie nie.

Die steekproef is geneem uit skoolprestasies onder die destydse nuwe sillabus vir Rekeningkunde wat toe vir die eerste keer met 'n Universiteitsprofessor in Rekeningkunde as waarnemer op die kernsillabuskomitee opgestel is met inagneming van universiteitsbehoefte en -standaarde. Daar is gekyk na die 1980-83 universiteitsprestasies maar sonder om onderskeid te maak tussen die Rekeningkundige rigting en die nie-rekeningkundige rigting.

Wat die B.Com.-rigting betref is daar wel bevind dat die volgende matriekvakke as voorspellers van die mate van sukses in dié rigting gebruik kan word, afgesien van die groototaal in die matriekeksamen: Wiskunde, 'n vak uit Groep E (waaronder Ekonomie resorteer), Biologie, Natuur-en Skeikunde en 'n vak uit Groep F waaronder Rekeningkunde resorteer.

3.4 VAKKEUSES IN STANDERD 6

In sommige onderwysdepartemente is Rekeningkunde 'n verpligte vak terwyl dit by meeste departemente 'n populêre keusevak is teenoor vakke soos Latyn, Duits, Frans en Kuns.

4. AANBEVELINGS

DAT DIE UITSLUITING VAN REKENINGKUNDE AS MATRIKULASIEVRYSTELLINGSVAK AGTERWEË GEHOU MOET WORD TOTDAT 'N SELFSTANDIGE ONDERSOEK DEUR DIE RGN INGESTEL IS OOR DIE VOORSPELLINGSWAARDE VAN REKENINGKUNDE ONDER DIE NUWE KERNSILLABUS RELATIEF TOT DIE ANDER Matriekvakke wat geneem kan word.

Kyk na die aangehegte afskrif van my Memorandum wat in Desember 1985 tot die GMR gerig is in hierdie verband.

PROF J.A. CILLIERS

19 MEI 1987

GMRMEMAC.WPF

ANALYSIS OF MAY 1987 ACCOUNTING I TEST

There were 386 students whose May 1987 tests were used in the analysis. A further 25 students were not present for the test.

80% of the test involved closing journal entries, presentation of Balance Sheet and Income Statement without minimum statutory observance, adjustment journal entries for year end and disposal of fixed assets. These were all items dealt with in school matric accounting. A further 20% of the test might be regarded as new material for some of these matric accounting students, i.e. mark up percentages (15%) and GAAP and Companies Act (5%).

Achievement in the test was grouped as follows:

- A - 61 to 75 out of 75
- B - 38 to 60 " " 75
- C - 25 to 37 " " 75
- D - 0 to 24 " " 75

Results of Analysis

Students who did accounting in Matric:

		% OF 149	% OF 386
A	34 students	23%	9%
B	96 "	64%	25%
C	17 "	12%	4%
D	2 "	1%	1%
	<u>149 students</u>	<u>100%</u>	<u>39%</u>
	===	====	===

Students who did NOT do Accounting in Matric:

		% OF 237	% OF 386
A	2 students	1%	1%
B	72 "	30%	18%
C	74 "	31%	19%
D	89 "	38%	23%
	<u>237</u>	<u>100%</u>	<u>61%</u>
	===	====	====

It is clear that with 23% of the class achieving an A category with a matric accounting background compared to not even 1% without, there is an immediate benefit; B category is 64% compared to 30% respectively.

The two lower categories of test achievement (C & D) show considerable disadvantage for those who did not enjoy school accounting.

It must be emphasised that this/not an entire year of accounting at university - the test covered only the first term's work (a quarter of the academic year).

All one can conclude from this analysis is that school accounting for matric provides a good basis for accounting up to at least the end of the first term. It may well be a good basis for accounting studies in the next terms, or years, but data for 1987 must be awaited.

The disadvantage remains that, if this be true, the matric accounting student is not challenged during this time in accounting; and because 61% of the class did not do accounting for matric, the pace of the class is restricted.

PROFESSOR D. A. CLULOW
HEAD - DEPARTMENT OF ACCOUNTANCY PMS

17 June 1987

APPENDIX 5

CHANGES MADE TO THE QUESTIONNAIRE AFTER THE PILOT STUDY

1. Initially, respondents were not asked to "mark the appropriate box with an X". Students appeared to cope very well with this lack of instruction. Only one person raised a question. The insertion of such a command was considered and rejected, as it was only questioned once. At a later stage however, following review of the questionnaire by a statistician prior to pre-coding, it was inserted. This was to remove any possible result that could perhaps lead to uncertainties in coding of responses.

2. Question 2 in Section A, dealing with the respondent's age was amended from "Age in completed years: ... years" to "Age last birthday: ... years". Many students failed to understand the question as it was originally posed.

3. Question 6 in Section A dealt with the matriculation examination written. The addition of another fixed response category for the Zimbabwean school leaving qualification was considered. It was decided that as Zimbabwean students are accustomed to dealing with questions relating to their school experience, the change was not warranted. Zimbabwean respondents coped during the pilot study by giving their details under the "other" category.

4. A question concerning year of enrolment at university was intended as a check question, that is, to ensure that year of matriculation and details of activities since leaving school were accurately answered.

5. The following question prompted an adverse reaction from most respondents:

"Was Accountancy one of your matriculation subjects?"

YES	
NO	

It was originally intended for this question to be a check to ensure that the respondent was answering the correct questionnaire. The question was removed as the researcher did not wish to antagonise respondents.

6. Question 2 in Section B dealt with areas where students who took accountancy at school have an advantage. Changes were as follows:

- "They understood the 'basics'" was changed to "They understood the basic concepts". This defined the area of advantage more precisely.
- Additional areas were added, based on responses to the pilot study. These were:
 - "They understood the terminology used in accounting"
 - "They were used to working with figures".

7. Question 3 in Section B dealt with areas where students who took accountancy at school have a disadvantage compared to those who did not. The area "They were confused because school accounting is different from university Accounting I" was changed to read "... school accounting is very different ...". It was felt that the insertion of 'very' would remove uncertainty regarding the meaning of this question.

8. Question 4 categorised the tests and examinations as follows:

- first-term test
- mid-year examination
- third-term test
- year-end examination.

The first-term and third-term tests were renamed April and September tests respectively. This change was made in order to accommodate terminology used at Durban. It was felt that the meaning of the terms would still be clear to Rhodes students.

9. Question 6 dealt with the various options for organising the Accounting I course. The following option was added as it was suggested by many respondents in the pilot study.

THE SAME COURSE FOR ALL STUDENTS, EXCEPT THAT STUDENTS WHO HAD NOT TAKEN ACCOUNTANCY AT SCHOOL WOULD HAVE EXTRA LECTURES	HIGHLY DETERIMENTAL	1
	DETRIMENTAL	2
	NEUTRAL	3
	BENEFICIAL	4
	HIGHLY BENEFICIAL	5

The following instruction was inserted:

"Alternatives should be considered independently of each other". The reason for this was that some students experienced difficulty in expressing opinions on conflicting options.

10. The change of the word 'NEUTRAL' in the scale to 'WOULD MAKE NO DIFFERENCE' was also considered as it was questioned by a few students. It was, however, felt that the latter was not appropriate to some of the options and consequently the change was not made.

11. The last three questions were added in an attempt to gauge respondents' opinions in respect of:

- the extent of differences between school and university accounting
- how the above should be addressed
- the standard of teaching of accountancy at school.

These questions were added with a view to collecting data for other research topics.

THIS QUESTIONNAIRE IS FOR
STUDENTS WHO

- ARE CURRENTLY DOING ACC II, III OR IV
AND
- DID NOT TAKE ACCOUNTANCY
FOR MATRIC



PURPOSE OF THIS STUDY

This study is being conducted in order to learn more about student attitudes to Accounting I courses offered at South African Universities. A better understanding of the problems associated with the Accounting I course may lead to changes which will ultimately be beneficial to all parties concerned.

WHERE IS THE STUDY BEING CONDUCTED?

This questionnaire is being administered to students at Natal University (Durban) and at Rhodes University. Students from first to fourth year are included.

IMPORTANCE OF ACCURATE INFORMATION

You are part of a sample which will represent hundreds of other students. You are, in fact, representing many students who are not part of the sample. It is vitally important, therefore, that you answer the questions as accurately as you can.

INFORMATION GATHERED IS CONFIDENTIAL

You will notice that you are not asked to provide your name so the information which you provide cannot be traced back to its source.

WHO IS CONDUCTING THE STUDY?

Researchers from Rhodes University in Grahamstown.

THANK YOU VERY MUCH FOR YOUR CO-OPERATION

THIS QUESTIONNAIRE IS ONLY TO BE ANSWERED BY STUDENTS WHO HAVE PASSED ACCOUNTING I WHO DID NOT TAKE ACCOUNTANCY AS A MATRICULATION SUBJECT

THIS QUESTIONNAIRE IS DIVIDED INTO TWO SECTIONS.

PLEASE ANSWER ALL QUESTIONS FROM BOTH SECTIONS.

PLEASE MARK THE APPROPRIATE BOX WITH AN X.

FOR OFFICE USE ONLY

<input type="checkbox"/>	<input type="checkbox"/>	1 - 2
<input type="checkbox"/>	<input type="checkbox"/>	3 - 4

SECTION A

1. Name of university where you are a student:

NATAL	1
RHODES	2

5

2. Age last birthday: years

6 - 7

3. Sex:

MALE	1
FEMALE	2

8

4. Have you passed the following courses?

YES NO

ACCOUNTING I	1	2
ACCOUNTING II	1	2
ACCOUNTING III	1	2
ACCOUNTING IV	1	2

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5. Have you failed any Accounting course at University?

YES NO

ACCOUNTING I	1	2
ACCOUNTING II	1	2
ACCOUNTING III	1	2
ACCOUNTING IV	1	2
OTHER (please specify)....	1	2
.....		

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FOR OFFICE
USE ONLY

6. When did you matriculate? 19...

19 - 20

7. Which matriculation examination did you write?

NATAL SENIOR CERTIFICATE	1
TRANSVAAL SENIOR CERTIFICATE	2
O.F.S. SENIOR CERTIFICATE	3
CAPE SENIOR CERTIFICATE	4
J.M.B.	5
OTHER (Please specify)	6
.....	

21

8. Did you enroll at University immediately after matriculating?

YES	1
NO	2

22

9. If you answered 'NO' to Question 8, please indicate what you did in the period between matriculating and entering university.

NATIONAL SERVICE	1
EMPLOYED	2
UNEMPLOYED	3
OTHER (Please specify)	4
.....	

23

10. When did you enroll at university for the first time? 19...

24 - 25

26 - 27

SECTION B

FOR OFFICE
USE ONLY

QUESTIONS IN THIS SECTION ASK FOR YOUR OPINIONS. PLEASE INDICATE YOUR OPINION EVEN IF YOU ARE NOT ABSOLUTELY SURE WHY YOU HOLD YOUR OPINION.

- 1. In your opinion, what proportion of your Accounting I class at your university, took Accountancy as a school subject?

JUST ABOUT THE WHOLE CLASS	1
ABOUT 75% OF THE CLASS	2
ABOUT 50% OF THE CLASS	3
ABOUT 25% OF THE CLASS	4
AN INSIGNIFICANT PROPORTION OF THE CLASS	5

28

- 2. THINK BACK TO WHEN YOU WERE DOING ACCOUNTING I.

In which, if any, of the following areas did students who took Accountancy at at school have an ADVANTAGE over those who did not?

Please indicate your opinion.

(You may put an X in more than one box.)

THEY UNDERSTOOD THE TERMINOLOGY USED IN ACCOUNTING	1
THEY UNDERSTOOD THE BASIC CONCEPTS	1
THEY TOOK LESS TIME TO DO THEIR ASSIGNMENTS	1
THEY COULD 'FOLLOW' THE LECTURER BETTER	1
THEY HAD TO SPEND LESS TIME ON ACCOUNTING STUDIES	1
THEY COULD SPEND MORE TIME ON THEIR OTHER SUBJECTS	1
THEY COULD MISS LECTURES WITHOUT BEING DISADVANTAGED	1
THEY WERE USED TO WORKING WITH FIGURES	1
THEY HAD AN 'OVERALL' ADVANTAGE	1
THEY HAD NO ADVANTAGE	1
OTHER (Please specify)	1
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3. THINK BACK TO WHEN YOU WERE DOING ACCOUNTING I.

In which, if any, of the following areas did students who took Accountancy at school have a disadvantage compared to those who did not? Please indicate your opinion. (You may put an X in more than one box.)

THEY BECAME OVER CONFIDENT BECAUSE THEY KNEW MORE	1
THEY WERE CONFUSED BECAUSE SCHOOL ACCOUNTING IS DIFFERENT FROM UNIVERSITY ACCOUNTING I	1
THEY FOUND THE FIRST FEW WEEKS SO EASY THAT THEY BECAME OVER CONFIDENT	1
THEY HAD NO DISADVANTAGES	1
THEY BECAME BORED BECAUSE THE COURSE DID NOT CHALLENGE THEM	1
OTHER (Please specify)	1

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45

4. Suppose that two students were 'equally clever' and worked 'equally hard' but that one had done Accountancy at school and the other had not. Which student would be likely to achieve better results in Accounting I? Indicate your opinion.

APRIL TEST	STUDENT WITH SCHOOL ACCOUNTING WOULD DO BETTER	1
	STUDENT WITHOUT SCHOOL ACCOUNTING WOULD DO BETTER	2
	STUDENTS WOULD SCORE SIMILAR MARKS	3

46

MID-YEAR EXAMINATION	STUDENT WITH SCHOOL ACCOUNTING WOULD DO BETTER	1
	STUDENT WITHOUT SCHOOL ACCOUNTING WOULD DO BETTER	2
	STUDENTS WOULD SCORE SIMILAR MARKS	3

47

SEPTEMBER TEST	STUDENT WITH SCHOOL ACCOUNTING WOULD DO BETTER	1
	STUDENT WITHOUT SCHOOL ACCOUNTING WOULD DO BETTER	2
	STUDENT WOULD SCORE SIMILAR MARKS	3

48

YEAR-END EXAMINATION	STUDENT WITH SCHOOL ACCOUNTING WOULD DO BETTER	1
	STUDENT WITHOUT SCHOOL ACCOUNTING WOULD DO BETTER	2
	STUDENTS WOULD SCORE SIMILAR MARKS	3

49

5. In your opinion, would any advantage which a student with school Accountancy has, continue into Accounting II?

YES	1
NO	2

50

Please give reasons for your answer.

51

.....
.....

6. There are a number of ways in which the Accounting I course could be organised/structured in order to take into account the fact that some students have done Accounting at school.

This question requires you to indicate your opinion regarding the different ways in which the Accounting I course could be organised.

Please consider each of the alternatives and indicate your opinion of EACH ONE by circling the appropriate number on the scale.

Alternatives should be considered independently of each other.

A PRE-SEMESTER COURSE FOR STUDENTS WHO HAVE NOT DONE ACCOUNTING AT SCHOOL WHICH WOULD ENABLE THEM TO 'CATCH UP' TO THOSE STUDENTS WHO HAVE DONE ACCOUNTING AT SCHOOL	HIGHLY DETRIMENTAL	1	<input type="checkbox"/> 52
	DETRIMENTAL	2	
	NEUTRAL	3	
	BENEFICIAL	4	
	HIGHLY BENEFICIAL	5	

A DIFFERENT SET OF LECTURES AND ASSIGNMENTS FOR STUDENTS WHO HAVE DONE ACCOUNTING AT SCHOOL. THESE LECTURES AND ASSIGNMENTS WOULD BE DESIGNED TO BUILD ON STUDENTS KNOWLEDGE WITHOUT SPENDING UNNECESSARY TIME ON CONCEPTS AND SKILLS WHICH STUDENTS WHO HAVE DONE ACCOUNTING AT SCHOOL ALREADY UNDERSTAND. STUDENTS WITH NO SCHOOL ACCOUNTING WOULD ATTEND A COURSE DESIGNED FOR BEGINNERS.	HIGHLY DETRIMENTAL	1	<input type="checkbox"/> 53
	DETRIMENTAL	2	
	NEUTRAL	3	
	BENEFICIAL	4	
	HIGHLY BENEFICIAL	5	

THE ACCOUNTING I COURSE COULD HAVE AS AN ENTRY REQUIREMENT THAT STUDENTS <u>MUST HAVE</u> TAKEN ACCOUNTING AT SCHOOL	HIGHLY DETRIMENTAL	1	<input type="checkbox"/> 54
	DETRIMENTAL	2	
	NEUTRAL	3	
	BENEFICIAL	4	
	HIGHLY BENEFICIAL	5	

THE ACCOUNTING I COURSE COULD HAVE AS AN ENTRY REQUIREMENT THAT STUDENTS <u>MUST NOT</u> HAVE TAKEN ACCOUNTING AT SCHOOL	HIGHLY DETRIMENTAL	1	<input type="checkbox"/> 55
	DETRIMENTAL	2	
	NEUTRAL	3	
	BENEFICIAL	4	
	HIGHLY BENEFICIAL	5	

STUDENTS WHO HAVE DONE ACCOUNTING AT SCHOOL AND THOSE WHO HAVE NOT WOULD ALL HAVE THE SAME LECTURERS BUT ASSIGNMENTS FOR THOSE WHO HAVE DONE ACCOUNTING WOULD BE DIFFERENT. THE ASSIGNMENTS WOULD BE DESIGNED TO ELIMINATE REPETITION AND WOULD THEREFORE BE LESS TIME CONSUMING.	HIGHLY DETRIMENTAL	1	<input type="checkbox"/> 56
	DETRIMENTAL	2	
	NEUTRAL	3	
	BENEFICIAL	4	
	HIGHLY BENEFICIAL	5	

QUESTION 6 (Continued)

THE SAME COURSE FOR ALL STUDENTS, EXCEPT THAT STUDENTS WHO HAD NOT TAKEN ACCOUNTANCY AT SCHOOL WOULD HAVE EXTRA LECTURES	HIGHLY DETRIMENTAL	1
	DETRIMENTAL	2
	NEUTRAL	3
	BENEFICIAL	4
	HIGHLY BENEFICIAL	5

57

THE ACCOUNTING I COURSE SHOULD BE THE SAME FOR ALL STUDENTS, BASED ON THE ASSUMP- TION THAT NO STUDENT HAS ANY KNOWLEDGE OF ACCOUNTING AT ALL.	HIGHLY DETRIMENTAL	1
	DETRIMENTAL	2
	NEUTRAL	3
	BENEFICIAL	4
	HIGHLY BENEFICIAL	5

58

YOUR IDEA FOR ACCOUNTING I COURSE DESIGN:

.....

.....

.....

.....

.....

.....

59

7. With the benefit of hindsight would you have chosen Accountancy as a school subject?

YES	1
NO	2

60

8. If you answered YES to Question 7 was it because it would have given you an advantage in 1st year Accounting?

YES	1
NO	2

61

FOR OFFICE
USE ONLY

9. Why didn't you choose Accountancy as a school subject?
You may make an X in more than one box.

TEACHER(S) PERSUADED ME NOT TO CHOOSE ACCOUNTANCY	2
THOUGHT IT WOULD NOT HELP WITH ACCOUNTING STUDY AT UNIVERSITY	2
MY PARENTS DIDN'T LIKE THE IDEA	2
PREFERRED OTHER SUBJECTS AT THE TIME	2
CONSIDERED TO BE TOO BORING	2
I DIDN'T KNOW WHAT ACCOUNTING ENTAILED AT THE TIME	2
CONSIDERED TO BE AN EASY OPTION	2
NOT OFFERED AT MY SCHOOL	2
THOUGHT IT WAS ONLY FOR UNINTELLIGENT PEOPLE	2
OTHER (Please specify)	2

- 62
- 63
- 64
- 65
- 66
- 67
- 68
- 69
- 70
- 71

10. It is sometimes said that school Accounting is different from the Accounting taught in the first few months of the University Accounting I course.

Do you agree with the above statement? Please indicate your opinion.

SCHOOL AND UNIVERSITY ACCOUNTING ARE <u>COMPLETELY</u> DIFFERENT	1
SCHOOL AND UNIVERSITY ACCOUNTING ARE <u>VERY</u> DIFFERENT	2
SCHOOL AND UNIVERSITY ACCOUNTING ARE <u>SLIGHTLY</u> DIFFERENT	3
SCHOOL AND UNIVERSITY ACCOUNTING ARE THE <u>SAME</u>	4

72

COMMENTS:

.....

.....

73

11. Refer to Question 10. If you thought that there was any difference between school and university Accounting, please indicate your opinion of the following strategies. Please circle the appropriate number on the scale.

THE UNIVERSITIES SHOULD TAILOR THEIR ACCOUNTING I COURSE OF 'FIT IN' WITH THE SCHOOL ACCOUNTANCY COURSE	HIGHLY DETRIMENTAL	1
	DETRIMENTAL	2
	NEUTRAL	3
	BENEFICIAL	4
	HIGHLY BENEFICIAL	5

74

THE SCHOOLS SHOULD TAILOR THEIR ACCOUNTANCY COURSE TO 'FIT IN' WITH THE UNIVERSITY ACCOUNTING I COURSE	HIGHLY DETRIMENTAL	1
	DETRIMENTAL	2
	NEUTRAL	3
	BENEFICIAL	4
	HIGHLY BENEFICIAL	5

75

SCHOOLS AND UNIVERSITIES SHOULD 'GET TOGETHER' AND DESIGN COURSES WHICH 'FIT IN' WITH ONE ANOTHER	HIGHLY DETRIMENTAL	1
	DETRIMENTAL	2
	NEUTRAL	3
	BENEFICIAL	4
	HIGHLY BENEFICIAL	5

76

SCHOOLS AND UNIVERSITIES SHOULD IGNORE ANY DIFFERENCES IN THEIR COURSES AND SHOULD DESIGN THEIR COURSES COMPLETELY INDEPENDENTLY	HIGHLY DETRIMENTAL	1
	DETRIMENTAL	2
	NEUTRAL	3
	BENEFICIAL	4
	HIGHLY BENEFICIAL	5

77

12 In your opinion, is the standard of teaching of Accountancy at schools generally:

VERY GOOD	1
GOOD	2
ADEQUATE	3
BAD	4
VERY BAD	5

78

THANK YOU

APPENDIX 7

**THIS QUESTIONNAIRE IS FOR
STUDENTS WHO**

- ARE CURRENTLY DOING ACC II, III OR IV**
- AND**
- TOOK ACCOUNTANCY FOR MATRIC**



PURPOSE OF THIS STUDY

This study is being conducted in order to learn more about student attitudes to Accounting I courses offered at South African Universities. A better understanding of the problems associated with the Accounting I course may lead to changes which will ultimately be beneficial to all parties concerned.

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This questionnaire is being administered to students at Natal University (Durban) and at Rhodes University. Students from first to fourth year are included.

IMPORTANCE OF ACCURATE INFORMATION

You are part of a sample which will represent hundreds of other students. You are, in fact, representing many students who are not part of the sample. It is vitally important, therefore, that you answer the questions as accurately as you can.

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THIS QUESTIONNAIRE IS DIVIDED INTO TWO SECTIONS.
PLEASE ANSWER ALL QUESTIONS FROM BOTH SECTIONS.
PLEASE MARK THE APPROPRIATE BOX WITH AN X.

SECTION A

1. Name of university where you are a student:

NATAL	1
RHODES	2

5

2. Age last birthday: years

6 - 7

3. Sex:

MALE	1
FEMALE	2

8

4. Have you passed the following courses?

YES NO

ACCOUNTING I	1	2
ACCOUNTING II	1	2
ACCOUNTING III	1	2
ACCOUNTING IV	1	2

9

10

11

12

5. Have you failed any Accounting course at University?

YES NO

ACCOUNTING I	1	2
ACCOUNTING II	1	2
ACCOUNTING III	1	2
ACCOUNTING IV	1	2
OTHER (please specify)..	1	2
.....		

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FOR OFFICE
USE ONLY

<input type="checkbox"/>	1 - 2
<input type="checkbox"/>	3 - 4

FOR OFFICE
USE ONLY

6. When did you matriculate? 19...

19 - 20

7. Which matriculation examination did you write?

NATAL SENIOR CERTIFICATE	1
TRANSCVAAL SENIOR CERTIFICATE	2
O.F.S. SENIOR CERTIFICATE	3
CAPE SENIOR CERTIFICATE	4
J.M.B.	5
OTHER (Please specify)	6
.....	

21

8. Did you enroll at University immediately after matriculating?

YES	1
NO	2

22

9. If you answered 'NO' to Question 8, please indicate what you did in the period between matriculating and entering university.

NATIONAL SERVICE	1
EMPLOYED	2
UNEMPLOYED	3
OTHER (Please specify)	4
.....	

23

10. When did you enroll at university for the first time? 19...

24 - 25

11. Did you study Accountancy at school on the Higher or the Standard grade?

HIGHER GRADE	1
STANDARD GRADE	2

26

FOR OFFICE
USE ONLY

12. What was your matriculation examination symbol for Accounting?

A	1
B	2
C	3
D	4
E	5
F	6
G	7

27

SECTION B

FOR OFFICE
USE ONLY

QUESTIONS IN THIS SECTION ASK FOR YOUR OPINIONS. PLEASE INDICATE YOUR OPINION EVEN IF YOU ARE NOT ABSOLUTELY SURE WHY YOU HOLD YOUR OPINION.

1. In your opinion, what proportion of your Accounting I class at your university, took Accountancy as a school subject?

JUST ABOUT THE WHOLE CLASS	1
ABOUT 75% OF THE CLASS	2
ABOUT 50% OF THE CLASS	3
ABOUT 25% OF THE CLASS	4
AN INSIGNIFICANT PROPORTION OF THE CLASS	5

28

2. THINK BACK TO WHEN YOU WERE DOING ACCOUNTING I.

In which, if any, of the following areas did students who took Accountancy at at school have an ADVANTAGE over those who did not?
Please indicate your opinion.
(You may put an X in more than one box.)

THEY UNDERSTOOD THE TERMINOLOGY USED IN ACCOUNTING	1
THEY UNDERSTOOD THE BASIC CONCEPTS	1
THEY TOOK LESS TIME TO DO THEIR ASSIGNMENTS	1
THEY COULD 'FOLLOW' THE LECTURER BETTER	1
THEY HAD TO SPEND LESS TIME ON ACCOUNTING STUDIES	1
THEY COULD SPEND MORE TIME ON THEIR OTHER SUBJECTS	1
THEY COULD MISS LECTURES WITHOUT BEING DISADVANTAGED	1
THEY WERE USED TO WORKING WITH FIGURES	1
THEY HAD AN 'OVERALL' ADVANTAGE	1
THEY HAD NO ADVANTAGE	1
OTHER (Please specify)	1
.....	

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3. THINK BACK TO WHEN YOU WERE DOING ACCOUNTING I.

In which, if any, of the following areas did students who took Accountancy at school have a disadvantage compared to those who did not? Please indicate your opinion. (You may put an X in more than one box.)

THEY BECAME OVER CONFIDENT BECAUSE THEY KNEW MORE	1
THEY WERE CONFUSED BECAUSE SCHOOL ACCOUNTING IS DIFFERENT FROM UNIVERSITY ACCOUNTING I	1
THEY FOUND THE FIRST FEW WEEKS SO EASY THAT THEY BECAME OVER CONFIDENT	1
THEY HAD NO DISADVANTAGES	1
THEY BECAME BORED BECAUSE THE COURSE DID NOT CHALLENGE THEM	1
OTHER (Please specify)	1

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4. Suppose that two students were 'equally clever' and worked 'equally hard' but that one had done Accountancy at school and the other had not. Which student would be likely to achieve better results in Accounting I? Indicate your opinion.

APRIL TEST	STUDENT WITH SCHOOL ACCOUNTING WOULD DO BETTER	1
	STUDENT WITHOUT SCHOOL ACCOUNTING WOULD DO BETTER	2
	STUDENTS WOULD SCORE SIMILAR MARKS	3

46

MID-YEAR EXAMINATION	STUDENT WITH SCHOOL ACCOUNTING WOULD DO BETTER	1
	STUDENT WITHOUT SCHOOL ACCOUNTING WOULD DO BETTER	2
	STUDENTS WOULD SCORE SIMILAR MARKS	3

47

SEPTEMBER TEST	STUDENT WITH SCHOOL ACCOUNTING WOULD DO BETTER	1
	STUDENT WITHOUT SCHOOL ACCOUNTING WOULD DO BETTER	2
	STUDENT WOULD SCORE SIMILAR MARKS	3

48

YEAR-END EXAMINATION	STUDENT WITH SCHOOL ACCOUNTING WOULD DO BETTER	1
	STUDENT WITHOUT SCHOOL ACCOUNTING WOULD DO BETTER	2
	STUDENTS WOULD SCORE SIMILAR MARKS	3

49

5. In your opinion, would any advantage which a student with school Accountancy has, continue into Accounting II?

YES	1
NO	2

50

Please give reasons for your answer.

51

.....
.....

6. There are a number of ways in which the Accounting I course could be organised/structured in order to take into account the fact that some students have done Accounting at school.

This question requires you to indicate your opinion regarding the different ways in which the Accounting I course could be organised.

Please consider each of the alternatives and indicate your opinion of EACH ONE by circling the appropriate number on the scale. Alternatives should be considered independently of each other.

A PRE-SEMESTER COURSE FOR STUDENTS WHO HAVE NOT DONE ACCOUNTING AT SCHOOL WHICH WOULD ENABLE THEM TO 'CATCH UP' TO THOSE STUDENTS WHO HAVE DONE ACCOUNTING AT SCHOOL	HIGHLY DETRIMENTAL	1	<input type="checkbox"/> 52
	DETRIMENTAL	2	
	NEUTRAL	3	
	BENEFICIAL	4	
	HIGHLY BENEFICIAL	5	

A DIFFERENT SET OF LECTURES AND ASSIGNMENTS FOR STUDENTS WHO HAVE DONE ACCOUNTING AT AT SCHOOL. THESE LECTURES AND ASSIGNMENTS WOULD BE DESIGNED TO BUILD ON STUDENTS KNOWLEDGE WITHOUT SPENDING UNNECESSARY TIME ON CONCEPTS AND SKILLS WHICH STUDENTS WHO HAVE DONE ACCOUNTING AT SCHOOL ALREADY UNDERSTAND. STUDENTS WITH NO SCHOOL ACCOUNTING WOULD ATTEND A COURSE DESIGNED FOR BEGINNERS.	HIGHLY DETRIMENTAL	1	<input type="checkbox"/> 53
	DETRIMENTAL	2	
	NEUTRAL	3	
	BENEFICIAL	4	
	HIGHLY BENEFICIAL	5	

THE ACCOUNTING I COURSE COULD HAVE AS AN ENTRY REQUIREMENT THAT STUDENTS <u>MUST HAVE</u> TAKEN ACCOUNTING AT SCHOOL	HIGHLY DETRIMENTAL	1	<input type="checkbox"/> 54
	DETRIMENTAL	2	
	NEUTRAL	3	
	BENEFICIAL	4	
	HIGHLY BENEFICIAL	5	

THE ACCOUNTING I COURSE COULD HAVE AS AN ENTRY REQUIREMENT THAT STUDENTS <u>MUST NOT</u> HAVE TAKEN ACCOUNTING AT SCHOOL	HIGHLY DETRIMENTAL	1	<input type="checkbox"/> 55
	DETRIMENTAL	2	
	NEUTRAL	3	
	BENEFICIAL	4	
	HIGHLY BENEFICIAL	5	

STUDENTS WHO HAVE DONE ACCOUNTING AT SCHOOL AND THOSE WHO HAVE NOT WOULD ALL HAVE THE SAME LECTURERS BUT ASSIGNMENTS FOR THOSE WHO HAVE DONE ACCOUNTING WOULD BE DIFFERENT. THE ASSIGNMENTS WOULD BE DESIGNED TO ELIMINATE REPETITION AND WOULD THEREFORE BE LESS TIME CONSUMING.	HIGHLY DETRIMENTAL	1	<input type="checkbox"/> 56
	DETRIMENTAL	2	
	NEUTRAL	3	
	BENEFICIAL	4	
	HIGHLY BENEFICIAL	5	

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USE ONLY

QUESTION 6 (Continued)

THE SAME COURSE FOR ALL STUDENTS, EXCEPT THAT STUDENTS WHO HAD NOT TAKEN ACCOUNTANCY AT SCHOOL WOULD HAVE EXTRA LECTURES.	HIGHLY DETRIMENTAL	1
	DETRIMENTAL	2
	NEUTRAL	3
	BENEFICIAL	4
	HIGHLY BENEFICIAL	5

57

THE ACCOUNTING I COURSE SHOULD BE THE SAME FOR ALL STUDENTS, BASED ON THE ASSUMPTION THAT NO STUDENT HAS ANY KNOWLEDGE OF ACCOUNTING AT ALL.	HIGHLY DETRIMENTAL	1
	DETRIMENTAL	2
	NEUTRAL	3
	BENEFICIAL	4
	HIGHLY BENEFICIAL	5

58

YOUR IDEA FOR ACCOUNTING I COURSE DESIGN:

.....

.....

.....

.....

.....

.....

59

7. With the benefit of hindsight would you have still have chosen Accountancy as a school subject?

YES	1
NO	2

60

8. If you answered YES to Question 7 was it because school Accountancy gave you an advantage in 1st year Accounting?

YES	1
NO	2

61

FOR OFFICE
USE ONLY

9. Why did you choose Accountancy as a school subject?
You may make an X in more than one box.

TEACHER(S) PERSUADED ME TO CHOOSE ACCOUNTANCY	1
THOUGHT IT WOULD HELP WITH ACCOUNTING STUDY AT UNIVERSITY	1
MY PARENTS LIKED THE IDEA	1
PREFERRED ACCOUNTANCY TO OTHER SUBJECTS FROM WHICH I COULD CHOOSE	1
CONSIDERED IT TO BE INTERESTING	1
IT SEEMED THE LEAST BORING OF THE SUBJECTS FROM WHICH I COULD CHOOSE	1
CONSIDERED TO BE AN EASY OPTION	1
OTHER (Please specify)	1
.....	
.....	
.....	

62

63

64

65

66

67

68

69 - 70

71

10. It is sometimes said that school Accounting is different from the Accounting taught in the first few months of the University Accounting I course.

Do you agree with the above statement? Please indicate your opinion.

SCHOOL AND UNIVERSITY ACCOUNTING ARE <u>COMPLETELY</u> DIFFERENT	1
SCHOOL AND UNIVERSITY ACCOUNTING ARE <u>VERY</u> DIFFERENT	2
SCHOOL AND UNIVERSITY ACCOUNTING ARE <u>SLIGHTLY</u> DIFFERENT	3
SCHOOL AND UNIVERSITY ACCOUNTING ARE THE <u>SAME</u>	4

COMMENTS:

.....

11. Refer to Question 10. If you thought that there was any difference between school and university Accounting, please indicate your opinion of the following strategies. Please circle the appropriate number on the scale.

THE UNIVERSITIES SHOULD TAILOR THEIR ACCOUNTING I COURSE OF 'FIT IN' WITH THE SCHOOL ACCOUNTANCY COURSE	HIGHLY DETRIMENTAL	1
	DETRIMENTAL	2
	NEUTRAL	3
	BENEFICIAL	4
	HIGHLY BENEFICIAL	5

THE SCHOOLS SHOULD TAILOR THEIR ACCOUNTANCY COURSE TO 'FIT IN' WITH THE UNIVERSITY ACCOUNTING I COURSE	HIGHLY DETRIMENTAL	1
	DETRIMENTAL	2
	NEUTRAL	3
	BENEFICIAL	4
	HIGHLY BENEFICIAL	5

SCHOOLS AND UNIVERSITIES SHOULD 'GET TOGETHER' AND DESIGN COURSES WHICH 'FIT IN' WITH ONE ANOTHER	HIGHLY DETRIMENTAL	1
	DETRIMENTAL	2
	NEUTRAL	3
	BENEFICIAL	4
	HIGHLY BENEFICIAL	5

SCHOOLS AND UNIVERSITIES SHOULD IGNORE ANY DIFFERENCES IN THEIR COURSES AND SHOULD DESIGN THEIR COURSES COMPLETELY INDEPENDENTLY	HIGHLY DETRIMENTAL	1
	DETRIMENTAL	2
	NEUTRAL	3
	BENEFICIAL	4
	HIGHLY BENEFICIAL	5

72

73

74

75

76

77

12 In your opinion, is the standard of teaching of Accountancy at schools generally:

VERY GOOD	1
GOOD	2
ADEQUATE	3
BAD	4
VERY BAD	5

78

THANK YOU

APPENDIX 8

**THIS QUESTIONNAIRE IS FOR
STUDENTS WHO**

- ARE CURRENTLY DOING ACC I**
- AND**
- DID NOT TAKE ACCOUNTANCY
FOR MATRIC**



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THIS QUESTIONNAIRE IS ONLY TO BE ANSWERED BY ACCOUNTING I STUDENTS WHO DID NOT TAKE ACCOUNTANCY AS A MATRICULATION SUBJECT

THIS QUESTIONNAIRE IS DIVIDED INTO TWO SECTIONS.

PLEASE ANSWER ALL QUESTIONS FROM BOTH SECTIONS.

PLEASE MARK THE APPROPRIATE BOX WITH AN X.

SECTION A

1. Name of university where you are a student:

NATAL	1
RHODES	2

2. Age last birthday: years

3. Sex:

MALE	1
FEMALE	2

4. Are you repeating Accounting I?

YES	1
NO	2

5. When did you matriculate? 19...

6. Which matriculation examination did you write?

NATAL SENIOR CERTIFICATE	1
TRANSCAAL SENIOR CERTIFICATE	2
O.F.S. SENIOR CERTIFICATE	3
CAPE SENIOR CERTIFICATE	4
J.M.B.	5
OTHER (Please specify)	6
.....	

FOR OFFICE USE ONLY

<input type="checkbox"/>	1 - 2
<input type="checkbox"/>	3 - 4

5

<input type="checkbox"/>	<input type="checkbox"/>	6 - 7
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8

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	9 - 11
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	12 - 14
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	15 - 17

18

<input type="checkbox"/>	<input type="checkbox"/>	19 - 20
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21

FOR OFFICE
USE ONLY

7. Did you enroll at University immediately after matriculating?

YES	1
NO	2

22

8. If you answered 'NO' to Question 7, please indicate what you did in the period between matriculating and entering University.

NATIONAL SERVICE	1
EMPLOYED	2
UNEMPLOYED	3
OTHER (Please specify)	4

23

9. When did you enroll at university for the first time? 19...

24 - 25

26 - 27

SECTION B

QUESTIONS IN THIS SECTION ASK FOR YOUR OPINIONS. PLEASE INDICATE YOUR OPINION EVEN IF YOU ARE NOT ABSOLUTELY SURE WHY YOU HOLD YOUR OPINION.

1. In your opinion, what proportion of the Accounting I class at your university, took Accountancy as a school subject?

JUST ABOUT THE WHOLE CLASS	1
ABOUT 75% OF THE CLASS	2
ABOUT 50% OF THE CLASS	3
ABOUT 25% OF THE CLASS	4
AN INSIGNIFICANT PROPORTION OF THE CLASS	5

28

2. In which, if any, of the following areas do students who have done Accountancy at school have an ADVANTAGE over those who have not? Please indicate your opinion.
(You may put an X in more than one box.)

THEY UNDERSTAND THE TERMINOLOGY USED IN ACCOUNTING	1
THEY UNDERSTAND THE BASIC CONCEPTS	1
THEY TAKE LESS TIME TO DO THEIR ASSIGNMENTS	1
THEY CAN 'FOLLOW' THE LECTURER BETTER	1
THEY HAVE TO SPEND LESS TIME ON ACCOUNTING STUDIES	1
THEY CAN SPEND MORE TIME ON THEIR OTHER SUBJECTS	1
THEY CAN MISS LECTURES WITHOUT BEING DISADVANTAGED	1
THEY ARE USED TO WORKING WITH FIGURES	1
THEY HAVE AN 'OVERALL' ADVANTAGE	1
THEY HAVE NO ADVANTAGE	1
OTHER (Please specify)	1
.....	

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FOR OFFICE
USE ONLY

3. In which, if any, of the following areas do students who have done Accountancy at school have a disadvantage compared to those who have not?
Please indicate your opinion.
(You may put an X in more than one box.)

THEY BECOME OVER CONFIDENT BECAUSE THEY KNOW MORE	1
THEY ARE CONFUSED BECAUSE SCHOOL ACCOUNTING IS DIFFERENT FROM UNIVERSITY ACCOUNTING I	1
THEY FIND THE FIRST FEW WEEKS SO EASY THAT THEY BECOME OVER CONFIDENT	1
THEY HAVE NO DISADVANTAGES	1
THEY BECOME BORED BECAUSE THE COURSE DOES NOT CHALLENGE THEM	1
OTHER (Please specify)	1

40

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42.

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4. Suppose that two students were 'equally clever' and worked 'equally hard' but that one had done Accountancy at school and the other had not. Which student would be likely to achieve better results in Accounting I? Indicate your opinion.

APRIL TEST	STUDENT WITH SCHOOL ACCOUNTING WOULD DO BETTER	1
	STUDENT WITHOUT SCHOOL ACCOUNTING WOULD DO BETTER	2
	STUDENTS WOULD SCORE SIMILAR MARKS	3

46

MID-YEAR EXAMINATION	STUDENT WITH SCHOOL ACCOUNTING WOULD DO BETTER	1
	STUDENT WITHOUT SCHOOL ACCOUNTING WOULD DO BETTER	2
	STUDENTS WOULD SCORE SIMILAR MARKS	3

47

SEPTEMBER TEST	STUDENT WITH SCHOOL ACCOUNTING WOULD DO BETTER	1
	STUDENT WITHOUT SCHOOL ACCOUNTING WOULD DO BETTER	2
	STUDENTS WOULD SCORE SIMILAR MARKS	3

48

YEAR-END EXAMINATION	STUDENT WITH SCHOOL ACCOUNTING WOULD DO BETTER	1
	STUDENT WITHOUT SCHOOL ACCOUNTING WOULD DO BETTER	2
	STUDENTS WOULD SCORE SIMILAR MARKS	3

49

5. In your opinion, would any advantage which a student with school Accountancy has, continue into Accounting II?

YES	1
NO	2

50

Please give reasons for your answer.

.....

51

6. There are a number of ways in which the Accounting I course could be organised/structured in order to take into account the fact that some students have done Accounting at school.

This question requires you to indicate your opinion regarding the different ways in which the Accounting I course could be organised.

Please consider each of the alternatives and indicate your opinion of EACH ONE by circling the appropriate number on the scale. Alternatives should be considered independently of each other.

A PRE-SEMESTER COURSE FOR STUDENTS WHO HAVE NOT DONE ACCOUNTING AT SCHOOL WHICH WOULD ENABLE THEM TO 'CATCH UP' TO THOSE STUDENTS WHO HAVE DONE ACCOUNTING AT SCHOOL	HIGHLY DETRIMENTAL	1
	DETRIMENTAL	2
	NEUTRAL	3
	BENEFICIAL	4
	HIGHLY BENEFICIAL	5

52

A DIFFERENT SET OF LECTURES AND ASSIGNMENTS FOR STUDENTS WHO HAVE DONE ACCOUNTING AT SCHOOL. THESE LECTURES AND ASSIGNMENTS WOULD BE DESIGNED TO BUILD ON STUDENTS KNOWLEDGE WITHOUT SPENDING UNNECESSARY TIME ON CONCEPTS AND SKILLS WHICH STUDENTS WHO HAVE DONE ACCOUNTING AT SCHOOL ALREADY UNDERSTAND. STUDENTS WITH NO SCHOOL ACCOUNTANCY WOULD ATTEND A COURSE DESIGNED FOR BEGINNERS.	HIGHLY DETRIMENTAL	1
	DETRIMENTAL	2
	NEUTRAL	3
	BENEFICIAL	4
	HIGHLY BENEFICIAL	5

53

THE ACCOUNTING I COURSE COULD HAVE AS AN ENTRY REQUIREMENT THAT STUDENTS <u>MUST HAVE</u> TAKEN ACCOUNTING AT SCHOOL	HIGHLY DETRIMENTAL	1
	DETRIMENTAL	2
	NEUTRAL	3
	BENEFICIAL	4
	HIGHLY BENEFICIAL	5

54

THE ACCOUNTING I COURSE COULD HAVE AS AN ENTRY REQUIREMENT THAT STUDENTS <u>MUST NOT HAVE</u> TAKEN ACCOUNTING AT SCHOOL	HIGHLY DETRIMENTAL	1
	DETRIMENTAL	2
	NEUTRAL	3
	BENEFICIAL	4
	HIGHLY BENEFICIAL	5

55

STUDENTS WHO HAVE DONE ACCOUNTING AT SCHOOL AND THOSE WHO HAVE NOT WOULD ALL HAVE THE SAME LECTURERS BUT ASSIGNMENTS FOR THOSE WHO HAVE DONE ACCOUNTING WOULD BE DIFFERENT. THE ASSIGNMENTS WOULD BE DESIGNED TO ELIMINATE REPETITION AND WOULD THEREFORE BE LESS TIME CONSUMING.	HIGHLY DETRIMENTAL	1
	DETRIMENTAL	2
	NEUTRAL	3
	BENEFICIAL	4
	HIGHLY BENEFICIAL	5

56

QUESTION 6 (Continued)

THE SAME COURSE FOR ALL STUDENTS, EXCEPT THAT STUDENTS WHO HAD NOT TAKEN ACCOUNTANCY AT SCHOOL WOULD HAVE EXTRA LECTURES.	HIGHLY DETRIMENTAL	1
	DETRIMENTAL	2
	NEUTRAL	3
	BENEFICIAL	4
	HIGHLY BENEFICIAL	5

57

THE ACCOUNTING I COURSE SHOULD BE THE SAME FOR ALL STUDENTS, BASED ON THE ASSUMPTION THAT NO STUDENT HAS ANY KNOWLEDGE OF ACCOUNTING AT ALL.	HIGHLY DETRIMENTAL	1
	DETRIMENTAL	2
	NEUTRAL	3
	BENEFICIAL	4
	HIGHLY BENEFICIAL	5

58

YOUR IDEA FOR ACCOUNTING I COURSE DESIGN:

.....

.....

.....

.....

.....

.....

59

7. With the benefit of hindsight would you have chosen Accountancy as a school subject?

YES	1
NO	2

60

8. If you answered YES to Question 7 was it because it would have given you an advantage in 1st year Accounting?

YES	1
NO	2

61

FOR OFFICE
USE ONLY

9. Why didn't you choose Accountancy as a school subject?
You may make an X in more than one box.

TEACHER(S) PERSUADED ME NOT TO CHOOSE ACCOUNTANCY	2
THOUGHT IT WOULD NOT HELP WITH ACCOUNTING STUDY AT UNIVERSITY	2
MY PARENTS DIDN'T LIKE THE IDEA	2
PREFERRED OTHER SUBJECTS AT THE TIME	2
CONSIDERED TO BE TOO BORING	2
I DIDN'T KNOW WHAT ACCOUNTING ENTAILED AT THE TIME	2
CONSIDERED TO BE AN EASY OPTION	2
NOT OFFERED AT MY SCHOOL	2
THOUGHT IT WAS ONLY FOR UNINTELLIGENT PEOPLE	2
OTHER (Please specify)	2

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FOR OFFICE
USE ONLY

10. It is sometimes said that school Accounting is different from the Accounting taught in the first few months of the University Accounting I course.

Do you agree with the above statement? Please indicate your opinion.

SCHOOL AND UNIVERSITY ACCOUNTING ARE <u>COMPLETELY</u> DIFFERENT	1
SCHOOL AND UNIVERSITY ACCOUNTING ARE <u>VERY</u> DIFFERENT	2
SCHOOL AND UNIVERSITY ACCOUNTING ARE <u>SLIGHTLY</u> DIFFERENT	3
SCHOOL AND UNIVERSITY ACCOUNTING ARE THE <u>SAME</u>	4

72

COMMENTS:

.....

.....

73

11. Refer to Question 10. If you thought that there was any difference between school and university Accounting, please indicate your opinion of the following strategies. Please circle the appropriate number on the scale.

THE UNIVERSITIES SHOULD TAILOR THEIR ACCOUNTING I COURSE OF 'FIT IN' WITH THE SCHOOL ACCOUNTANCY COURSE	HIGHLY DETRIMENTAL	1
	DETRIMENTAL	2
	NEUTRAL	3
	BENEFICIAL	4
	HIGHLY BENEFICIAL	5

74

THE SCHOOLS SHOULD TAILOR THEIR ACCOUNTANCY COURSE TO 'FIT IN' WITH THE UNIVERSITY ACCOUNTING I COURSE	HIGHLY DETRIMENTAL	1
	DETRIMENTAL	2
	NEUTRAL	3
	BENEFICIAL	4
	HIGHLY BENEFICIAL	5

75

SCHOOLS AND UNIVERSITIES SHOULD 'GET TOGETHER' AND DESIGN COURSES WHICH 'FIT IN' WITH ONE ANOTHER	HIGHLY DETRIMENTAL	1
	DETRIMENTAL	2
	NEUTRAL	3
	BENEFICIAL	4
	HIGHLY BENEFICIAL	5

76

SCHOOLS AND UNIVERSITIES SHOULD IGNORE ANY DIFFERENCES IN THEIR COURSES AND SHOULD DESIGN THEIR COURSES COMPLETELY INDEPENDENTLY	HIGHLY DETRIMENTAL	1
	DETRIMENTAL	2
	NEUTRAL	3
	BENEFICIAL	4
	HIGHLY BENEFICIAL	5

77

12 In your opinion, is the standard of teaching of Accountancy at schools generally:

VERY GOOD	1
GOOD	2
ADEQUATE	3
BAD	4
VERY BAD	5

78

THANK YOU

APPENDIX 9

**THIS QUESTIONNAIRE IS FOR
STUDENTS WHO**

**- ARE CURRENTLY DOING ACC I
AND**

- TOOK ACCOUNTANCY FOR MATRIC



PURPOSE OF THIS STUDY

This study is being conducted in order to learn more about student attitudes to Accounting I courses offered at South African Universities. A better understanding of the problems associated with the Accounting I course may lead to changes which will ultimately be beneficial to all parties concerned.

WHERE IS THE STUDY BEING CONDUCTED?

This questionnaire is being administered to students at Natal University (Durban) and at Rhodes University. Students from first to fourth year are included.

IMPORTANCE OF ACCURATE INFORMATION

You are part of a sample which will represent hundreds of other students. You are, in fact, representing many students who are not part of the sample. It is vitally important, therefore, that you answer the questions as accurately as you can.

INFORMATION GATHERED IS CONFIDENTIAL

You will notice that you are not asked to provide your name so the information which you provide cannot be traced back to its source.

WHO IS CONDUCTING THE STUDY?

Researchers from Rhodes University in Grahamstown.

THANK YOU VERY MUCH FOR YOUR CO-OPERATION

ONLY

THIS QUESTIONNAIRE IS ONLY TO BE ANSWERED BY ACCOUNTING I STUDENTS WHO TOOK ACCOUNTANCY AS A MATRICULATION SUBJECT

THIS QUESTIONNAIRE IS DIVIDED INTO TWO SECTIONS.

PLEASE ANSWER ALL QUESTIONS FROM BOTH SECTIONS.

PLEASE MARK THE APPROPRIATE BOX WITH AN X

SECTION A

1. Name of university where you are a student:

NATAL	1
RHODES	2

2. Age last birthday: years

3. Sex:

MALE	1
FEMALE	2

4. Are you repeating Accounting I?

YES	1
NO	2

5. When did you matriculate? 19...

6. Which matriculation examination did you write?

NATAL SENIOR CERTIFICATE	1
TRANSVAAL SENIOR CERTIFICATE	2
O.F.S. SENIOR CERTIFICATE	3
CAPE SENIOR CERTIFICATE	4
J.M.B.	5
Other (Please specify)	6
.....	

7. Did you enroll at University immediately after matriculating?

YES	1
NO	2

<input type="checkbox"/>	<input type="checkbox"/>	1 - 2
<input type="checkbox"/>	<input type="checkbox"/>	3 - 4

5

6 - 7

8

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	9 - 11
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	12 - 14
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	15 - 17

18

19 - 20

21

22

8. If you answered 'NO' to Question 7, please indicate what you did in the period between matriculating and entering university.

NATIONAL SERVICE	1
EMPLOYED	2
UNEMPLOYED	3
OTHER (Please specify)	4
.....	

23

9. When did you enroll at university for the first time? 19...

24 - 25

10. Did you study Accountancy at school on the Higher or the Standard grade?

HIGHER GRADE	1
STANDARD GRADE	2

26

11. What was your matriculation examination symbol for Accounting?

A	1
B	2
C	3
D	4
E	5
F	6
G	7

27

SECTION B

FOR OFFICE
USE ONLY

QUESTIONS IN THIS SECTION ASK FOR YOUR OPINIONS. PLEASE INDICATE YOUR OPINION EVEN IF YOU ARE NOT ABSOLUTELY SURE WHY YOU HOLD YOUR OPINION.

1. In your opinion, what proportion of the Accounting I class at your university, took Accountancy as a school subject?

JUST ABOUT THE WHOLE CLASS	1
ABOUT 75% OF THE CLASS	2
ABOUT 50% OF THE CLASS	3
ABOUT 25% OF THE CLASS	4
AN INSIGNIFICANT PROPORTION OF THE CLASS	5

28

2. In which, if any, of the following areas do students who have done Accountancy at school have an ADVANTAGE over those who have not? Please indicate your opinion. (You may put an X in more than one box.)

THEY UNDERSTAND THE TERMINOLOGY USED IN ACCOUNTING	1
THEY UNDERSTAND THE BASIC CONCEPTS	1
THEY TAKE LESS TIME TO DO THEIR ASSIGNMENTS	1
THEY CAN 'FOLLOW' THE LECTURER BETTER	1
THEY HAVE TO SPEND LESS TIME ON ACCOUNTING STUDIES	1
THEY CAN SPEND MORE TIME ON THEIR OTHER SUBJECTS	1
THEY CAN MISS LECTURES WITHOUT BEING DISADVANTAGED	1
THEY ARE USED TO WORKING WITH FIGURES	1
THEY HAVE AN 'OVERALL' ADVANTAGE	1
THEY HAVE NO ADVANTAGE	1
OTHER (Please specify)	1
.....	

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FOR OFFICE
USE ONLY

3. In which, if any, of the following areas do students who have done Accountancy at school have a disadvantage compared to those who have not? Please indicate your opinion. (You may put an X in more than one box.)

THEY BECOME OVER CONFIDENT BECAUSE THEY KNOW MORE	1
THEY ARE CONFUSED BECAUSE SCHOOL ACCOUNTING IS DIFFERENT FROM UNIVERSITY ACCOUNTING I	1
THEY FIND THE FIRST FEW WEEKS SO EASY THAT THEY BECOME OVER CONFIDENT	1
THEY HAVE NO DISADVANTAGES	1
THEY BECOME BORED BECAUSE THE COURSE DOES NOT CHALLENGE THEM	1
OTHER (Please specify)	1

40

41

42

43

44

45

4. Suppose that two students were 'equally clever' and worked 'equally hard' but that one had done Accountancy at school and the other had not. Which student would be likely to achieve better results in Accounting I? Indicate your opinion.

APRIL TEST	STUDENT WITH SCHOOL ACCOUNTING WOULD DO BETTER	1
	STUDENT WITHOUT SCHOOL ACCOUNTING WOULD DO BETTER	2
	STUDENTS WOULD SCORE SIMILAR MARKS	3

46

MID-YEAR EXAMINATION	STUDENT WITH SCHOOL ACCOUNTING WOULD DO BETTER	1
	STUDENT WITHOUT SCHOOL ACCOUNTING WOULD DO BETTER	2
	STUDENTS WOULD SCORE SIMILAR MARKS	3

47

SEPTEMBER TEST	STUDENT WITH SCHOOL ACCOUNTING WOULD DO BETTER	1
	STUDENT WITHOUT SCHOOL ACCOUNTING WOULD DO BETTER	2
	STUDENTS WOULD SCORE SIMILAR MARKS	3

48

YEAR-END EXAMINATION	STUDENT WITH SCHOOL ACCOUNTING WOULD DO BETTER	1
	STUDENT WITHOUT SCHOOL ACCOUNTING WOULD DO BETTER	2
	STUDENTS WOULD SCORE SIMILAR MARKS	3

49

5. In your opinion, would any advantage which a student with school Accountancy has, continue into Accounting II?

YES	1
NO	2

50

Please give reasons for your answer.

.....

51

6. There are a number of ways in which the Accounting I course could be organised/structured in order to take into account the fact that some students have done Accounting at school.

This question requires you to indicate your opinion regarding the different ways in which the Accounting I course could be organised.

Please consider each of the alternatives and indicate your opinion of EACH ONE by circling the appropriate number on the scale. Alternatives should be considered independently of each other.

A PRE-SEMESTER COURSE FOR STUDENTS WHO HAVE NOT DONE ACCOUNTING AT SCHOOL WHICH WOULD ENABLE THEM TO 'CATCH UP' TO THOSE STUDENTS WHO HAVE DONE ACCOUNTING AT SCHOOL	HIGHLY DETRIMENTAL	1	<input type="checkbox"/> 52
	DETRIMENTAL	2	
	NEUTRAL	3	
	BENEFICIAL	4	
	HIGHLY BENEFICIAL	5	

A DIFFERENT SET OF LECTURES AND ASSIGNMENTS FOR STUDENTS WHO HAVE DONE ACCOUNTING AT AT SCHOOL. THESE LECTURES AND ASSIGNMENTS WOULD BE DESIGNED TO BUILD ON STUDENTS KNOWLEDGE WITHOUT SPENDING UNNECESSARY TIME ON CONCEPTS AND SKILLS WHICH STUDENTS WHO HAVE DONE ACCOUNTING AT SCHOOL ALREADY UNDERSTAND. STUDENTS WITH NO SCHOOL ACCOUNTANCY WOULD ATTEND A COURSE DESIGNED FOR BEGINNERS.	HIGHLY DETRIMENTAL	1	<input type="checkbox"/> 53
	DETRIMENTAL	2	
	NEUTRAL	3	
	BENEFICIAL	4	
	HIGHLY BENEFICIAL	5	

THE ACCOUNTING I COURSE COULD HAVE AS AN ENTRY REQUIREMENT THAT STUDENTS <u>MUST HAVE</u> TAKEN ACCOUNTING AT SCHOOL	HIGHLY DETRIMENTAL	1	<input type="checkbox"/> 54
	DETRIMENTAL	2	
	NEUTRAL	3	
	BENEFICIAL	4	
	HIGHLY BENEFICIAL	5	

THE ACCOUNTING I COURSE COULD HAVE AS AN ENTRY REQUIREMENT THAT STUDENTS <u>MUST NOT</u> HAVE TAKEN ACCOUNTING AT SCHOOL	HIGHLY DETRIMENTAL	1	<input type="checkbox"/> 55
	DETRIMENTAL	2	
	NEUTRAL	3	
	BENEFICIAL	4	
	HIGHLY BENEFICIAL	5	

STUDENTS WHO HAVE DONE ACCOUNTING AT SCHOOL AND THOSE WHO HAVE NOT WOULD ALL HAVE THE SAME LECTURERS BUT ASSIGNMENTS FOR THOSE WHO HAVE DONE ACCOUNTING WOULD BE DIFFERENT. THE ASSIGNMENTS WOULD BE DESIGNED TO ELIMINATE REPETITION AND WOULD THEREFORE BE LESS TIME CONSUMING.	HIGHLY DETRIMENTAL	1	<input type="checkbox"/> 56
	DETRIMENTAL	2	
	NEUTRAL	3	
	BENEFICIAL	4	
	HIGHLY BENEFICIAL	5	

QUESTION 6 (Continued)

THE SAME COURSE FOR ALL STUDENTS, EXCEPT THAT STUDENTS WHO HAD NOT TAKEN ACCOUNTANCY AT SCHOOL WOULD HAVE EXTRA LECTURES.	HIGHLY DETRIMENTAL	1
	DETRIMENTAL	2
	NEUTRAL	3
	BENEFICIAL	4
	HIGHLY BENEFICIAL	5

57

THE ACCOUNTING I COURSE SHOULD BE THE SAME FOR ALL STUDENTS, BASED ON THE ASSUMPTION THAT NO STUDENT HAS ANY KNOWLEDGE OF ACCOUNTING AT ALL.	HIGHLY DETRIMENTAL	1
	DETRIMENTAL	2
	NEUTRAL	3
	BENEFICIAL	4
	HIGHLY BENEFICIAL	5

58

YOUR IDEA FOR ACCOUNTING I COURSE DESIGN:

.....

.....

.....

.....

.....

.....

59

7. With the benefit of hindsight would you still have chosen Accountancy as a school subject?

YES	1
NO	2

60

8. If you answered YES to Question 7 was it because school accountancy has an advantage in 1st year Accounting?

YES	1
NO	2

61

FOR OFFICE
USE ONLY

9. Why did you choose Accountancy as a school subject?
You may make an X in more than one box.

TEACHER(S) PERSUADED ME TO CHOOSE ACCOUNTANCY	1
THOUGHT IT WOULD HELP WITH ACCOUNTING STUDY AT UNIVERSITY	1
MY PARENTS LIKED THE IDEA	1
PREFERRED ACCOUNTING TO THE OTHER SUBJECTS FROM WHICH I COULD CHOOSE	1
CONSIDERED IT TO BE INTERESTING	1
IT SEEMED THE LEAST BORING OF THE SUBJECTS FROM WHICH I COULD CHOOSE	1
CONSIDERED TO BE AN EASY OPTION	1
OTHER (Please specify)	1

62

63

64

65

66

67

68

69 - 70

71

FOR OFFICE
USE ONLY

10. It is sometimes said that school Accounting is different from the Accounting taught in the first few months of the University Accounting I course.

Do you agree with the above statement? Please indicate your opinion.

SCHOOL AND UNIVERSITY ACCOUNTING ARE <u>COMPLETELY</u> DIFFERENT	1
SCHOOL AND UNIVERSITY ACCOUNTING ARE <u>VERY</u> DIFFERENT	2
SCHOOL AND UNIVERSITY ACCOUNTING ARE <u>SLIGHTLY</u> DIFFERENT	3
SCHOOL AND UNIVERSITY ACCOUNTING ARE THE <u>SAME</u>	4

72

COMMENTS:

.....

.....

73

11. Refer to Question 10. If you thought that there was any difference between school and university Accounting, please indicate your opinion of the following strategies. Please circle the appropriate number on the scale.

THE UNIVERSITIES SHOULD TAILOR THEIR ACCOUNTING I COURSE OF 'FIT IN' WITH THE SCHOOL ACCOUNTANCY COURSE	HIGHLY DETRIMENTAL	1
	DETRIMENTAL	2
	NEUTRAL	3
	BENEFICIAL	4
	HIGHLY BENEFICIAL	5

74

THE SCHOOLS SHOULD TAILOR THEIR ACCOUNTANCY COURSE TO 'FIT IN' WITH THE UNIVERSITY ACCOUNTING I COURSE	HIGHLY DETRIMENTAL	1
	DETRIMENTAL	2
	NEUTRAL	3
	BENEFICIAL	4
	HIGHLY BENEFICIAL	5

75

SCHOOLS AND UNIVERSITIES SHOULD 'GET TOGETHER' AND DESIGN COURSES WHICH 'FIT IN' WITH ONE ANOTHER	HIGHLY DETRIMENTAL	1
	DETRIMENTAL	2
	NEUTRAL	3
	BENEFICIAL	4
	HIGHLY BENEFICIAL	5

76

SCHOOLS AND UNIVERSITIES SHOULD IGNORE ANY DIFFERENCES IN THEIR COURSES AND SHOULD DESIGN THEIR COURSES COMPLETELY INDEPENDENTLY	HIGHLY DETRIMENTAL	1
	DETRIMENTAL	2
	NEUTRAL	3
	BENEFICIAL	4
	HIGHLY BENEFICIAL	5

77

12 In your opinion, is the standard of teaching of Accountancy at schools generally:

VERY GOOD	1
GOOD	2
ADEQUATE	3
BAD	4
VERY BAD	5

78

THANK YOU



APPENDIX 10

28 Junie 1988

Liewe Professor

Dankie dat u ingestem het om my vraelys deur lede van u departement voltooi te laat word.

Ek sluit hierby in:

- afskrifte van die vraelys
- 'n geadresseerde, gefrankeerde koevert vir u gebruik om die voltooide vraelyste aan my terug te stuur.

Let asseblief wel dat die vraelys deur alle akademiese personeel, indien moontlik, voltooi moet word, of hulle gemoeid is met eerstejaar rekeningkunde aldan nie. Die feit dat 'n akademikus geen mening oor sekere aspekte mag he nie sal belangrik wees vir my studie.

Ek sou dit waardeer indien u self 'n vraelys sou voltooi en as u daarbenewens op 'n aparte blad sou aandui of u departement tot enige mate verskil in sy benadering tot onderskeidelik studente wat rekeningkunde op skool gedoen het en diegene wat dit nie gedoen het nie.

Weereens dankie vir u samewerking.

Die uwe

J E Rowlands
SENIOR LEKTOR IN REKENINGKUNDE



28 Junie 1988

Geagte respondent

Dankie dat u ingestem het om die aangehegte vraelys to voltooi. Hierdie studie het dit ten doel om houdinge te bepaal aangaande rekeningkunde as vak op beide skool en daarna universiteit. Heelwat navorsing is al op hierdie onderwerp in die VSA, die Verenigde Koninkryk en Australië gedoen en dit is tans aktueel in Suid-Afrika weens voorgestelde veranderinge in die leerplan vir skole.

Die doel van die vraelys is om die houdinge van akademiese rekenmeesters te bepaal.

U sal merk dat alle vrae gestruktureerd is maar dat voorsiening gemaak is vir u kommentaar. Ek sal enige kommentaar waardeer, selfs indien dit nie direkte betrekking het tot die vrae self nie.

U word versoek om elke vraag volledig te beantwoord ongeag die feit dat u dalk geen belangstelling in die saak het nie of dat u nie betrokke is by die dosering van rekeningkunde nie. Die menings van akademici in hierdie kategorie is uiters belangrik vir die navorsingstuk.

Die bevindinge sal gestuur word aan alle deelnemende universiteite.

Weereens dankie vir u samewerking.

Die uwe

Jeff Rowlands
SENIOR LEKTOR IN REKENINGKUNDE

LW: VOLTOOI ASSEBLIEF DIE VRAELYS SELFS INDIEN U GEEN MENING HET NIE OF INDIEN U ONBEKWAAM VOEL OM 'N MENING TE LIG WANT DIT OP SIGSELF SAL UITERS BELANGRIK WEES TOT MY NAVORSING.

HIERDIE VRAELYS IS IN TWEË AFDELINGS GEDEEL.
BEANTWOORD ASSEBLIEF ALLE VRAE IN BEIDE AFDELINGS.
MERK ASSEBLIEF DIE TOEPASLIKE BLOKKIE MET 'N X.

SLEGS VIR
KANTOORGEBRUIK

1 - 3

AFDELING A

1. Naam van universiteit.....

4 - 5

2. Ouderdom jaar

6 - 7

3. Geslag

MANLIK	1
VROULIK	2

8

4. Huidige pos beklee

JUNIOR LEKTOR	1
LEKTOR	2
SENIOR LEKTOR	3
MEDE-PROFESSOR	4
PROFESSOR	5
ANDER (dui aan asseblief)	6

9

5. Ondervinding as akademikus

0 - 3 jaar	1
4 - 5 jaar	2
6 - 10 jaar	3
11 jaar of meer	4

10

SLEGS VIR
KANTOORGEBRUIK

6. Vakke wat u doseer het

FINANSIËLE REKENINGKUNDE	1
OUDITKUNDE	1
BELASTING	1
KOSTE-EN BESTUURSREKENINGKUNDE	1
ANDER (dui aan asseblief)	1

11

12

13

14

15

7. Indien u finansiële rekeningkunde doseer het, dui aan op watter vlak/vlakke.

REKENINGKUNDE I	1
REKENINGKUNDE II	1
REKENINGKUNDE III	1
REKENINGKUNDE IV	1

16

17

18

19

8. Het u klas gegee in rekeningkunde op hoërskool?

JA	1
NEE	2

20

9. Was rekeningkunde een van u vakke in matriek gewees?

JA	1
NEE	2

21

AFDELING B

In hierdie afdeling word u mening gevra. Miskien sal u voel dat u mening nie op objektiewe wyse gestaaf kan word nie. Geliewe dit nogtans te opper asseblief.

- Volgens u mening, het studente in Rekeningkunde I op u universiteit wat die vak op skool geneem het enige voordele teenoor diegene wat dit nie op skool geneem het nie?

JA	1
NEE	2
GEEN MENING	3

KOMMENTAAR:

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22

23

- Volgens u mening, het studente in Rekeningkunde I op u universiteit wat die vak op skool geneem het enige nadele teenoor diegene wat dit nie op skool geneem het nie?

JA	1
NEE	2
GEEN MENING	3

KOMMENTAAR:

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24

25

3. Gestel twee studente is 'ewe slim', maar een het rekeningkunde op skool gedoen en die ander nie. Welke student sou waarskynlik beter vaar in Rekeningkunde I op u universiteit?

'N TOETS IN MAART/APRIL	STUDENT MET SKOOL REKENINGKUNDE SOU BETER VAAR	1
	STUDENT SONDER SKOOL REKENINGKUNDE SOU BETER VAAR	2
	STUDENTE SOU SOORTGELYKE PUNTE BEHAAL	3
	GEEN MENING	4

26

'N JUNIE- EKSAMEN	STUDENT MET SKOOL REKENINGKUNDE SOU BETER VAAR	1
	STUDENT SONDER SKOOL REKENINGKUNDE SOU BETER VAAR	2
	STUDENTE SOU SOORTGELYKE PUNTE BEHAAL	3
	GEEN MENING	4

27

'N TOETS IN SEPTEMBER	STUDENT MET SKOOL REKENINGKUNDE SOU BETER VAAR	1
	STUDENT SONDER SKOOL REKENINGKUNDE SOU BETER VAAR	2
	STUDENTE SOU SOORTGELYKE PUNTE BEHAAL	3
	GEEN MENING	4

28

'N NOVEMBER EKSAMEN	STUDENT MET SKOOL REKENINGKUNDE SOU BETER VAAR	1
	STUDENT SONDER SKOOL REKENINGKUNDE SOU BETER VAAR	2
	STUDENTE SOU SOORTGELYKE PUNTE BEHAAL	3
	GEEN MENING	4

29

KOMMENTAAR:

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4. Indien u JA geantwoord het op Vraag 1, sou sodanige voordeel voortduur tot in Rekeningkunde II op u universiteit? (Indien u NEE geantwoord het op vraag 1, ignoreer hierdie vraag).

JA	1
NEE	2
GEEN MENING	3

Verstrek asseblief redes vir u antwoord.

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31

5. Etlike maniere kan moontlik gebruik word om die Rekeningkunde I kursus op te stel teneinde die feit in ag te neem dat sekere studente rekeningkunde op skool gedoen het.

Hierdie vraag verlang van u om kommentaar te lewer op die moontlike voordele vir studente uit die verskillende maniere waarvolgens Rekeningkunde I georganiseer kan word.

Toon u mening van ELKEEN van die ondergenoemde alternatiewe aan, deur sirkelkies om die betrokke nommers te trek.

Alternatiewe moet onafhanklik van mekaar oorweeg word.

LET WEL: WERKSTUKKE = werk wat studente in hul eie tyd moet doen en/of werk wat gedurende 'n 'praktiese' sessie gedoen moet word.
SEMINARE = klein groepe studente met 'n studieleier.

'N VOOR-SEMESTER KURSUS VIR STUDENTE WAT NIE REKENINGKUNDE OP SKOOL GEDOEN HET NIE, SODAT HULLE DIE KENNIS VAN DIEGENE WAT WEL DIE VAK OP SKOOL GENEEM HET, KAN INHAAL	HOOGS NADELIG	1
	NADELIG	2
	NEUTRAAL	3
	VOORDELIG	4
	HOOGS VOORDELIG	5

32

STUDENTE WAT REKENINGKUNDE OP SKOOL GENEEM HET WOON KLASSE BY EN DOEN WERKSTUKKE WAT ONTWERP IS OM OP HUL BESTAANDE KENNIS TE BOU SONDER OM ONNODIGE TYD TE MORS AAN KONSEPTE EN VAARDIGHEDEN WAARVAN HULLE REEDS KENNIS DRA.

ANDER STUDENTE WOON 'N KURSUS VIR BEGINNERS BY.

HOOGS NADELIG	1
NADELIG	2
NEUTRAAL	3
VOORDELIG	4
HOOGS VOORDELIG	5

33

SKOOL REKENINGKUNDE IS 'N VEREISTE TOT TOELATING TOT REKENINGKUNDE I.	HOOGS NADELIG	1
	NADELIG	2
	NEUTRAAL	3
	VOORDELIG	4
	HOOGS VOORDELIG	5

34

OM TOELATING TOT REKENINGKUNDE I TE VERKRY MAG STUDENTS NIE REKENINGKUNDE OP SKOOL GEDOEN HET NIE	HOOGS NADELIG	1
	NADELIG	2
	NEUTRAAL	3
	VOORDELIG	4
	HOOGS VOORDELIG	5

35

ALLE STUDENTE WOON DIESELFDE KLASSE BY, MAAR DIEGENE WAT REKENINGKUNDE OP SKOOL GEDOEN HET, DOEN ANDER WERKSTUKKE WAT ONTWERP IS OM HERHALING TE VERMY EN DAARDEUR TYD TE BESPAAR	HOOGS NADELIG	1
	NADELIG	2
	NEUTRAAL	3
	VOORDELIG	4
	HOOGS VOORDELIG	5

36

ALLE STUDENTE DOEN DIESELFDE KURSUS, BEHALWE DAT DIEGENE WAT NIE REKENINGKUNDE OP SKOOL GEDOEN HET NIE WOON BYKOMENDE KLASSE EN/OF SEMINARE BY	HOOGS NADELIG	1
	NADELIG	2
	NEUTRAAL	3
	VOORDELIG	4
	HOOGS VOORDELIG	5

37

DIE REKENINGKUNDE I KURSUS WORD AANGEBIED ASOF GEEN STUDENT ENIGE KENNIS VAN DIE VAK HET NIE	HOOGS NADELIG	1
	NADELIG	2
	NEUTRAAL	3
	VOORDELIG	4
	HOOGS VOORDELIG	5

38

U IDEE VIR REKENINGKUNDE I KURSUS ONTWERP/KOMMENTAAR:

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39

6. 'Skool rekeningkunde en Rekeningkunde I op universiteit verskil van mekaar'.

Dui u mening van bogemelde stelling aan ten opsigte van die Rekeningkunde I kursus op u universiteit.

REKENINGKUNDE OP SKOOL EN UNIVERSITEIT VERSKIL <u>HEELTEMAL</u>	1
REKENINGKUNDE OP SKOOL EN UNIVERSITEIT VERSKIL <u>BAIE</u>	2
REKENINGKUNDE OP SKOOL EN UNIVERSITEIT VERSKIL <u>EFFENS</u>	3
REKENINGKUNDE OP SKOOL EN UNIVERSITEIT IS <u>DIESELFDE</u>	4
WEET NIE	5

KOMMENTAAR:

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41

7. Geliewe u mening van die onderstaande strategies aan te dui deur sirkelkies om die toepaslike nommers te trek.

DIE UNIVERSITEITE BEHOORT HUL REKENINGKUNDE I KURSUS IN TE PAS BY SKOOL REKENINGKUNDE	HOOGS ONWENSLIK	1
	ONWENSLIK	2
	NEUTRAAL	3
	WENSLIK	4
	HOOGS WENSLIK	5
	GEEN MENING	6

42

DIE SKOLE BEHOORT HUL REKENINGKUNDE KURSUS IN TE PAS BY DIE UNIVERSITEITS-KURSUS IN REKENINGKUNDE I	HOOGS ONWENSLIK	1
	ONWENSLIK	2
	NEUTRAAL	3
	WENSLIK	4
	HOOGS WENSLIK	5
	GEEN MENING	6

43

SKOLE EN UNIVERSITEITE BEHOORT MET MEKAAR TE SKAKEL. 'N BETER BEGRIP VAN MEKAAR SE PROBLEME EN PERSEPSIES SOU DAARTOE LEI DAT DIE ONDERSKEIE KURSUSSE KOMPLEMENTÊR ONTWERP SOU KON WORD.	HOOGS ONWENSLIK	1
	ONWENSLIK	2
	NEUTRAAL	3
	WENSLIK	4
	HOOGS WENSLIK	5
	GEEN MENING	6

44

SKOLE EN UNIVERSITEITE BEHOORT ENIGE VERSKILLE IN MEKAAR SE KURSUSSE TE IGNOREER EN BEHOORT HUL ONDERSKEIE KURSUSSE ONAFHANKLIK TE ONTWERP.	HOOGS ONWENSLIK	1
	ONWENSLIK	2
	NEUTRAAL	3
	WENSLIK	4
	HOOGS WENSLIK	5
	GEEN MENING	6

45

KOMMENTAAR

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46

8. Volgens u mening, wat is die vernaamste tekortkominge van skool rekeningkunde?

ONVOLDOENDE LEERPLAN	1
ONDERGEKWALIFISEERDE ONDERWYSERS	1
BEHOORT NIE IN STANDERDS 6 EN 7 AANGEBIED TE WORD NIE, MAAR WEL SLEGS IN STANDERDS 8, 9 EN 10	1
ONDERWYSERS BESKIK NIE OOR PRAKTIESE ONDERVINDING IN REKENINGKUNDE NIE	1
GEEN TEKORTKOMINGE	1
GEEN MENING	1

- 47
- 48
- 49
- 50
- 51
- 52

KOMMENTAAR:

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53

9. Behoort skool rekeningkunde as 'vrystellingsvak' aanvaar te word?

JA	1
NEE	2
GEEN MENING	3

54

KOMMENTAAR:

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55

10. Tot watter mate skakel u departement met persone en/of instansies bemoeid met skool rekeningkunde?
Geliewe 'n sirkelkie om die toepaslike nommer te trek.

GEEN KONTAK

DEEGLIKE KONTAK

0 1 2 3 4 5

56

WEET NIE	6
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KOMMENTAAR:

57

11. Is u daarvan bewus dat 'n groot hersiening van die skool leerplan in 1984 daargestel is?

JA	1
NEE	2

58

12. Watter kennis dra u van die skool rekeningkunde leerplan?
Geliewe 'n sirkelkie om die toepaslike nommer te trek.

GEEN KENNIS

DEEGLIKE KENNIS

0 1 2 3 4 5

59

13. Dink u dat studente op u universiteit, wat rekeningkunde op skool gedoen het, meen dat hulle 'n voordeel in Rekeningkunde I het?

JA	1
NEE	2
GEEN MENING	3

60

KOMMENTAAR:

61

14. Dink u dat studente op u universiteit, wat nie rekeningkunde op skool gedoen het nie, die indruk het dat diegene wat die vak wel op skool gedoen het, 'n voordeel in Rekeningkunde I het?

JA	1
NEE	2
GEEN MENING	3

KOMMENTAAR:

62

63

15. Was u ooit betrokke gewees by die ontwerp van 'n eerstejaars kursus in finansiële rekeningkunde op enige universiteit?

JA	1
NEE	2

64

16. Was u ooit betrokke gewees in enige ondersoek betreffende die verwantskap tussen skool- en universiteits- finansiële rekeningkunde?

JA	1
NEE	2

65

Indien u ja geantwoord het, verstrek asseblief kortliks besonderhede.

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66

17. NAAM

As u verkies, mag u egter anoniem bly.

67



APPENDIX 11

28 June 1988

Dear Professor

Thank you very much for agreeing to have my questionnaire answered by members of the academic staff of your department.

Enclosed are:

- copies of the questionnaire
- an addressed, postage paid envelope for returning completed questionnaires to me.

Please note that the questionnaire should, if possible, be answered by all members of the academic staff regardless of whether or not they have any interest in the first year financial accounting course. The fact that an academic may have no opinion on some issues will be important for my study.

I would be very grateful if you would complete a questionnaire and if you would indicate on a separate sheet whether your department distinguishes in any way between students who have done accounting at school and those who have not.

Thank you once again for your co-operation.

Yours sincerely

J E Rowlands
SENIOR LECTURER IN ACCOUNTING



Dear Respondent

Thank you for agreeing to answer the attached questionnaire.

The purpose of this research is to assess attitudes concerning high school accounting study and subsequent university level accounting study. Much research has been done in this field in the USA, UK and Australia and is particularly topical in South Africa because of proposed changes to the school curriculum.

The aim of this particular questionnaire is to assess the attitudes of academic accountants.

You will notice that all questions asked are closed-ended but that provision has been made for your comments. I would be extremely grateful for any comments which you wish to make even if they are not directly related to the question being asked.

Respondents are requested to answer the questionnaire fully even if they have no interest in this particular topic or are not involved in teaching introductory financial accounting. Opinions of academics falling into this category are of vital importance for this research.

Results of this survey will be sent to all universities participating in this study.

Thank you once again for your co-operation.

Yours sincerely

Jeff Rowlands
SENIOR LECTURER IN ACCOUNTING

NB: PLEASE NOTE THAT YOU SHOULD COMPLETE THE QUESTIONNAIRE EVEN IF YOU HAVE NO OPINION OR FEEL UNQUALIFIED TO GIVE AN OPINION AS THIS IN ITSELF WILL BE VITAL TO MY RESEARCH.

THIS QUESTIONNAIRE IS DIVIDED INTO TWO SECTIONS.

PLEASE ANSWER ALL QUESTIONS FROM BOTH SECTIONS.

PLEASE MARK THE APPROPRIATE BOX WITH AN X.

FOR OFFICE
USE ONLY

1 - 3

SECTION A

1. Name of university

4 - 5

2. Age last birthday years

6 - 7

3. Sex:

MALE	1
FEMALE	2

8

4. Position currently held

JUNIOR LECTURER	1
LECTURER	2
SENIOR LECTURER	3
ASSOCIATE PROFESSOR	4
PROFESSOR	5
OTHER (Please specify)	6

9

5. Number of years of academic experience

0 - 3	1
4 - 5	2
6 - 10	3
11 or more	4

10

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USE ONLY

6. Subjects which you have taught

FINANCIAL ACCOUNTING	1
AUDITING	1
TAXATION	1
COST/MANAGEMENT ACCTNG	1
OTHER (please specify)	1

11

12

13

14

15

7. Indicate the level/levels at which you have taught financial accounting. Ignore this question if you have never taught financial accounting.

ACCOUNTING I	1
ACCOUNTING II	1
ACCOUNTING III	1
ACCOUNTING IV	1

16

17

18

19

8. Have you taught accounting at high school level?

YES	1
NO	2

20

9. Did you take accounting as one of your matriculation subjects?

YES	1
NO	2

21

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SECTION B

This section requires that you indicate your opinion. You may feel that your opinion cannot necessarily be justified by reference to objective evidence. Please indicate your opinion nevertheless.

1. In your opinion do Accounting I students, at your university, who took accounting at high school have any advantages compared to those who did not?

YES	1
NO	2
NO OPINION	3

COMMENTS

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22

23

2. In your opinion do Accounting I students, at your university, who took accounting at high school have any disadvantages compared to those who did not?

YES	1
NO	2
NO OPINION	3

COMMENTS

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24

25

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3. Suppose that two students were 'equally clever' but that one had done accounting at school and the other had not. Which student would be likely to achieve better results in Accounting I at your University? Indicate your opinion.

A TEST IN MARCH/APRIL	STUDENT WITH SCHOOL ACCOUNTING WOULD DO BETTER	1
	STUDENT WITHOUT SCHOOL ACCOUNTING WOULD DO BETTER	2
	STUDENTS WOULD SCORE SIMILAR MARKS	3
	NO OPINION	4

26

A MID-YEAR EXAMINATION	STUDENT WITH SCHOOL ACCOUNTING WOULD DO BETTER	1
	STUDENT WITHOUT SCHOOL ACCOUNTING WOULD DO BETTER	2
	STUDENTS WOULD SCORE SIMILAR MARKS	3
	NO OPINION	4

27

A TEST IN SEPTEMBER	STUDENT WITH SCHOOL ACCOUNTING WOULD DO BETTER	1
	STUDENT WITHOUT SCHOOL ACCOUNTING WOULD DO BETTER	2
	STUDENTS WOULD SCORE SIMILAR MARKS	3
	NO OPINION	4

28

A YEAR-END EXAMINATION	STUDENT WITH SCHOOL ACCOUNTING WOULD DO BETTER	1
	STUDENT WITHOUT SCHOOL ACCOUNTING WOULD DO BETTER	2
	STUDENTS WOULD SCORE SIMILAR MARKS	3
	NO OPINION	4

29

COMMENTS

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USE ONLY

4. Would any advantage which a student with school accounting might have continue into Accounting II at your university? Ignore this question if you answered NO to Question 1.

YES	1
NO	2
NO OPINION	3

Please give reasons for your answer.

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5. There are a number of ways in which the Accounting I course could be organised/structured in order to take into account the fact that some students have done accounting at school.

This question requires you to indicate your opinion of the benefits which students would derive from the different ways in which the Accounting I course could be organised.

Please consider each of the alternatives and indicate your opinion of EACH ONE by circling the appropriate number on the scale.

Alternatives should be considered independently of each other.

NOTE: ASSIGNMENTS = work assigned for students to do during their own time and/or work required to be done during a 'practical' session.

TUTORIALS = Small groups of students meeting with a tutor

A PRE-SEMESTER COURSE FOR STUDENTS WHO HAVE NOT DONE ACCOUNTING AT SCHOOL WHICH WOULD ENABLE THEM TO 'CATCH UP' TO THOSE STUDENTS WHO HAVE DONE ACCOUNTING AT SCHOOL	HIGHLY DETRIMENTAL	1
	DETRIMENTAL	2
	NEUTRAL	3
	BENEFICIAL	4
	HIGHLY BENEFICIAL	5

32

A DIFFERENT SET OF LECTURES AND ASSIGNMENTS FOR STUDENTS WHO HAVE DONE ACCOUNTING AT AT SCHOOL. THESE LECTURES AND ASSIGNMENTS WOULD BE DESIGNED TO BUILD ON STUDENTS KNOWLEDGE WITHOUT SPENDING UNNECESSARY TIME ON CONCEPTS AND SKILLS WHICH STUDENTS WHO HAVE DONE ACCOUNTING AT SCHOOL ALREADY UNDERSTAND. STUDENTS WITH NO SCHOOL ACCOUNTING WOULD ATTEND A COURSE DESIGNED FOR BEGINNERS.

HIGHLY DETRIMENTAL	1
DETRIMENTAL	2
NEUTRAL	3
BENEFICIAL	4
HIGHLY BENEFICIAL	5

33

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THE ACCOUNTING I COURSE COULD HAVE AS AN ENTRY REQUIREMENT THAT STUDENTS <u>MUST HAVE</u> TAKEN ACCOUNTING AT SCHOOL	HIGHLY DETRIMENTAL	1
	DETRIMENTAL	2
	NEUTRAL	3
	BENEFICIAL	4
	HIGHLY BENEFICIAL	5

34

THE ACCOUNTING I COURSE COULD HAVE AS AN ENTRY REQUIREMENT THAT STUDENTS <u>MUST NOT HAVE</u> TAKEN ACCOUNTING AT SCHOOL	HIGHLY DETRIMENTAL	1
	DETRIMENTAL	2
	NEUTRAL	3
	BENEFICIAL	4
	HIGHLY BENEFICIAL	5

35

STUDENTS WHO HAVE DONE ACCOUNTING AT SCHOOL AND THOSE WHO HAVE NOT WOULD ALL HAVE THE SAME LECTURES BUT ASSIGNMENTS FOR THOSE WHO HAVE DONE ACCOUNTING WOULD BE DIFFERENT. THE ASSIGNMENTS WOULD BE DESIGNED TO ELIMINATE REPETITION AND WOULD THEREFORE BE LESS TIME CONSUMING.	HIGHLY DETRIMENTAL	1
	DETRIMENTAL	2
	NEUTRAL	3
	BENEFICIAL	4
	HIGHLY BENEFICIAL	5

36

THE SAME COURSE FOR ALL STUDENTS, EXCEPT THAT STUDENTS WHO HAD NOT TAKEN ACCOUNTING AT SCHOOL WOULD HAVE EXTRA LECTURES AND/OR TUTORIALS	HIGHLY DETRIMENTAL	1
	DETRIMENTAL	2
	NEUTRAL	3
	BENEFICIAL	4
	HIGHLY BENEFICIAL	5

37

THE ACCOUNTING I COURSE SHOULD BE THE SAME FOR ALL STUDENTS, BASED ON THE ASSUMPTION THAT NO STUDENT HAS ANY KNOWLEDGE OF ACCOUNTING AT ALL.	HIGHLY DETRIMENTAL	1
	DETRIMENTAL	2
	NEUTRAL	3
	BENEFICIAL	4
	HIGHLY BENEFICIAL	5

38

YOUR IDEA FOR ACCOUNTING I COURSE DESIGN/COMMENTS:

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39

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USE ONLY

6. 'School accounting and university Accounting I courses are different!' Indicate your opinion of this statement in respect of the Accounting I course at your university.

SCHOOL AND UNIVERSITY ACCOUNTING ARE <u>COMPLETELY</u> DIFFERENT	1
SCHOOL AND UNIVERSITY ACCOUNTING ARE <u>VERY</u> DIFFERENT	2
SCHOOL AND UNIVERSITY ACCOUNTING ARE <u>SLIGHTLY</u> DIFFERENT	3
SCHOOL AND UNIVERSITY ACCOUNTING ARE THE <u>SAME</u>	4
DON'T KNOW	5

40

COMMENTS:

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41

7. Please indicate your opinion of the following strategies. Please circle the appropriate number on the scale.

THE UNIVERSITIES SHOULD TAILOR THEIR ACCOUNTING I COURSE TO 'FIT IN' WITH THE SCHOOL ACCOUNTING COURSE	HIGHLY UNDESIRABLE	1
	UNDESIRABLE	2
	NEUTRAL	3
	DESIRABLE	4
	HIGHLY DESIRABLE	5
	NO OPINION	6

42

THE SCHOOLS SHOULD TAILOR THEIR ACCOUNTING COURSE TO 'FIT IN' WITH THE UNIVERSITY ACCOUNTING I COURSE	HIGHLY UNDESIRABLE	1
	UNDESIRABLE	2
	NEUTRAL	3
	DESIRABLE	4
	HIGHLY DESIRABLE	5
	NO OPINION	6

43

SCHOOLS AND UNIVERSITIES SHOULD ESTABLISH CONTACT WITH ONE ANOTHER. A BETTER UNDERSTANDING OF PROBLEMS AND PERCEPTIONS WOULD ENABLE THE RESPECTIVE COURSES TO BE DESIGNED SO AS TO BE COMPLEMENTARY.	HIGHLY UNDESIRABLE	1
	UNDESIRABLE	2
	NEUTRAL	3
	DESIRABLE	4
	HIGHLY DESIRABLE	5
	NO OPINION	6

44

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SCHOOLS AND UNIVERSITIES SHOULD IGNORE ANY DIFFERENCES IN THEIR COURSES AND SHOULD DESIGN THEIR COURSES COMPLETELY INDEPENDENTLY.	HIGHLY UNDESIRABLE	1
	UNDESIRABLE	2
	NEUTRAL	3
	DESIRABLE	4
	HIGHLY DESIRABLE	5
	NO OPINION	6

45

COMMENTS

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46

8. What do you consider to be the major shortcomings of high school accounting? You may select more than one shortcoming.

POOR SYLLABUS	1
UNDERQUALIFIED TEACHERS	1
SHOULD NOT BE TAUGHT IN STD 6 AND 7 i.e. SHOULD ONLY BE TAUGHT IN STD 8, 9 AND 10	1
TEACHERS LACK PRACTICAL ACCOUNTING EXPERIENCE	1
NO SHORTCOMINGS	1
NO OPINION	1

47

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COMMENTS

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53

9. Should accounting at school qualify as a matriculation 'exemption' subject?

YES	1
NO	2
NO OPINION	3

54

COMMENTS

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55

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USE ONLY

10. To what extent does your department have contact with people and/or institutions involved in high school accounting?
Please circle the appropriate number.

NO CONTACT

EXTENSIVE CONTACT

0 1 2 3 4 5

DON'T KNOW	6
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56

COMMENTS

57

11. Are you aware that a major revision of the school accounting syllabus was implemented in 1984?

YES	1
NO	2

58

12. What knowledge do you have of the school accounting syllabus?
Please circle the appropriate number.

NO KNOWLEDGE

EXTENSIVE KNOWLEDGE

0 1 2 3 4 5

59

13. In your opinion, do students at your university who took accounting at high school consider that they have an advantage in Accounting I?

YES	1
NO	2
NO OPINION	3

60

COMMENTS

61

FOR OFFICE
USE ONLY

14. Do students, at your university, who did not take accounting at high school perceive those who did, to have an advantage in their Accounting I studies?

YES	1
NO	2
NO OPINION	3

COMMENTS

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62

63

15. Have you at any time been involved in the design of a first year university financial accounting course at any university?

YES	1
NO	2

64

16. Have you been involved in any way in any study involving the relationship between school accounting and first year university financial accounting?

YES	1
NO	2

65

If you answered 'yes' to this question please give brief details

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17. NAME

Please ignore this question if you wish to remain anonymous.

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