The University of Hull

A Study of the Relationship Between Entry Qualifications and Achievement of Third Level Business Studies Students in Ireland, with Particular reference to Cork Institute of Technology in the Period 1996-2000

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By

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Abstract

This research focused on the study of entry qualifications and Third Level achievement of Business Studies Students. Quantitative and qualitative research methods were undertaken to investigate the findings.Quantitative studies of over two hundred students were analysed over a period of four years.This tracked students through the NCBS for two years, plus the NDBS for one year and the BBS degree for one year. Qualitative research involved interviewing over one hundred students in Third Level Business Studies courses,from both sectors of the higher education binary system in Ireland. What follows includes some of the principal findings of the research study.

The findings showed that there was a positive but not perfect association between LCE points achievement and subsequent achievement in Third Level Business Studies. A study of the mandatory qualification requirement of Mathematics and English found that higher achievers in Mathematics had a better achievement rate in Third Level. However, the subject of English did not appear to provide a reasonable correlation with Third Level achievement.

The research studied the three second level Business Studies subjects available on the senior cycle curriculum; Accounting, Business Organisation and Economics. Accounting was shown to be the most beneficial subject to study for achievement . Study of the subject at second level was shown to have inherent

advantages for students compared to their counterparts who had not studied it.

Students with poor academic achievement in their LCE can attain higher achievement academically in Third Level Business Studies than higher achievers in the LCE with the principal reasons for this including their commitment to studies in Third Level education.

The thesis remedies a gap in the research literature. Consequently the findings will be of significant benefit to stakeholders including students, teachers, parents,career counsellors and curriculum developers.

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LIST OF ABBREVIATIONS

ACCA	Association of Chartered Certified Accountants
BBS	Bachelor of Business Studies
CAO	Central Applications Office
CIMA	Chartered Institute of Management Accountants
CIT	Cork Institute of Technology
DCU	Dublin City University
FETAC	Further Education and Training Authority Council
HEA	Higher Education Authority
HETAC	Higher Education and Training Authority Council
ICAI	Institute of Chartered Accountants in Ireland
IT	Institute of Technology
ITL	Institute of Technology Letterkenny
LCE	Leaving Certificate Examination
NCBS	National Certificate in Business Studies
NCCA	National Council for Curriculum and Assessment
NCEA	National Council for Educational Awards
NDBS	National Diploma in Business Studies
NUIG	National University of Ireland Galway
QLE	Quality of Learning Experience
QUB	The Queens University Belfast
RTC	Regional Technical College
SPSS	Statistical Package for the Social Sciences
TCD	Trinity College Dublin
UCC	University College Cork
UL	University of Limerick
UU	University of Ulster

CHAPTER I

INTRODUCTION

This research is concerned with Business Studies students. It focuses on the relationship between entry qualifications and achievement in third level education. The main entry qualification's requirement for a student to enter Business Studies in higher education in Ireland is the Leaving Certificate Examination (LCE) of the Department of Education. Entry qualifications laid down by Universities and Institutes of Technology require that an applicant has passed six subjects including Mathematics and English or Irish. It is worth noting that, for some disciplines, Universities and Institutes of Technology insist on candidates having studied and achieved particular grades in their LCE in related subjects (Central Applications Office CAO 1998). The following are some examples: analytical science in Dublin City University (D.C.U) insists on a minimum of ordinary C in science, biotechnology similarly requires applicants to have an ordinary C grade in science, commerce with French in National University of Ireland Galway (N.U.I.G) demands a higher B in French; Dublin Institute of Technology (D.I.T) requires a higher C in science to enter engineering, Trinity College Dublin insists on a higher B in Physics to take their theoretical Physics Degree course (CAO College Handbook 1998).

Although there are Business Studies subjects that can be followed in the LCE, no University or Institute of Technology in Ireland requires a student to have studied these subjects in order to enter Business Studies Certificate, Diploma or Degree courses. This is clear from the admissions regulations of Higher Education Institutions. The three Business Studies subjects in the LCE are Accounting, Economics and Business Organisation. Students select one or more of these subjects for various reasons. In the writers' view, such reasons include having studied Business Studies at Junior Certificate level, the motivation to achieve points for third level entry, the intention of taking up employment in business or the motivation to prepare for Business Studies at third level.

A typical Business Studies course, whether Certificate, Diploma or Degree in higher education, normally contains a mix of students with various backgrounds. In Cork Institute of Technology (C.I.T) some will not have studied any Business Studies subject in the LCE, others will have attempted either one or two or all Business Studies subjects for two to three years or more before entering third level education.

Little research has been undertaken on the benefits or otherwise of studying Business Studies subjects prior to entering Business Studies courses in higher education in Ireland. Some academics in third level Institutions argue that students with no prior knowledge of Business Studies subjects are better students in third level Business Studies courses. Examples of this can be found among lecturers in first year Accounting in CIT. This view is supported by Professor (Lord) Robins (1955), statement that school Economics might "spoil" the future undergraduate. It is worth noting that post Robins (1955) the subject of Economics grew in the secondary schools in the United Kingdom. In Ireland, as in the United Kingdom, Universities and Institutes of Technology are admitting substantial numbers of students who have already covered much of the ground of the first year of some of their syllabuses (Harbury and Szreter 1968).

Little research has been undertaken in the Irish higher education system to either substantiate or contradict these claims. One study noted that students with Accounting in their LCE achieved higher academic performance in Accounting in first year Bachelor of Commerce Accounting in University College Dublin (UCD) than their counterparts who had not studied the subject (Clarke 1989).

In Ireland the number of students taking Accounting, Business Organisation and Economics in their LCE studies has increased over the years since their inception in the syllabus according to statistical returns. Not totally unrelated to this is that when Economics was introduced in the United Kingdom in 1951, the subject expanded more

rapidly than any other subject at "A" level and more than three times as fast as the total number of subjects (Harbury Szreter (1955).

Studies carried out by Clarke (1989) and Somers (1992), which will be discussed in chapter three, refer to University students. No research can be traced in respect of Business Studies students in Institutes of Technology in Ireland.

The LCE is the entry requirement at the end of second level education for entry to third level. Competition for places at third level is intense and students are preoccupied with subject selection and achievement. It is intended at this juncture to consider the admissions system, admissions machinery for higher education, and legislation governing entry requirements.

The Admissions Machinery for Higher Education

The CAO is a limited company incorporated under the Companies Acts 1963 to 1992. It was set up by the Higher Education Institutions in Ireland to deal with applications for places in these Colleges. The CAO office only processes entry to the first year of undergraduate courses in the Universities and Institutes of Technology. In 1998 the first year of courses in private colleges in Dublin were added to the system.

It must be emphasised that the individual higher educational institutions retain full decision making over their own admissions criteria. The CAO will facilitate specific methods of selection put forward by any individual third level college/institution. In the context of the research being pursued in this study, any individual college could put forward specific

subjects in addition to English and Mathematics, such as Business Studies subjects of one or more of Accounting, Business Organisation and or Economics.

In addition to the Universities, Institutes of Technology and private colleges, the CAO acts as an agent for Colleges of Education, the National College of Art and Design, the National College of Industrial Relations, Theological Colleges and the Royal College of Surgeons in Ireland.

The CAO makes available application forms each year. A student can use this single application form to apply for up to twenty different courses. Ten Certificate or Diploma courses and ten Degree courses can be selected with the applicant ranking both categories in order of preference. This form must be returned by the first of February together with a fee of £18. A late application will be accepted up to the month of May and applicants can change their mind up to July. The CAO application procedure also facilitates certain courses described as "restricted application courses". These courses necessitate assessment procedures at Easter. Such courses include architecture, art, drama, design, furniture, T.V. and film, graphics, leisure, marine engineering, music, nautical science, photography and broadcasting. Selection of these courses must be included in the application form referred to above.

Offers of places on courses, occur in August each year. At this time the Department of Education will have returned the LCE results on computer disc to the CAO office in Galway. The achievement grades in the LCE will determine the courses to be offered. A candidate may receive two offers: either a Certificate or Diploma course and a Degree course. If a student is offered his or her first choice, no more offers will be made. However, if an applicant is offered a lesser preference, a more preferred choice in the application ranking may be made in later rounds i.e. second, third or fourth rounds. The Degree list and the Certificate Diploma list operate independently, and whilst an offer may be received from both categories, a candidate can accept only one course.

Students Achieving Minimum Entry Qualifications

The majority of third level courses in third level education institutions in Ireland attract more students than there are places available. National Certificate in Business Studies (NCBS) courses in 1998/1999 academic year attracted a higher demand for places than the supply of places in the Institution (CAO Report 2000 p.13). The extent of the demand exceeding supply of places differs from college to college. An indication of the shortage of places can be seen from the amount of points required. In Cork Institute of Technology, 350 points were required for first round offers, Galway Mayo Institute of Technology, 340 points were needed for a first round offer, Limerick Institute of Technology, 315 points. Other Institutes made first round offers to students achieving less points. Athlone Institute of Technology required 165 points for a first round offer, Dundalk 145 points and Letterkenny, 130 points (Institutes of Technology Handbooks 1998). Notably Institutes of Technology in University cities required significantly higher points than Institutes in non University areas. This can be seen from the points figures for entry as indicated above.

As the points are determined each year, it is impossible for students to anticipate points required in advance. In practice students in selecting their LCE subjects and planning their studies are guided by the points requirement of the previous year. As points have on many occasions increased from year to year, many students repeat their LCE or seek alternative courses (examples are post LCE courses mainly in secondary schools).

Legislation Governing Entry Qualifications

Legislation governing third level educational institutions in Ireland allows the Universities and Institutes of Technology to determine their own admission requirements for entry to their courses of study. The Universities are governed by the Universities Act (1997). This Act provides for the academic council of the individual university to make recommendations to the governing body on admission requirements for the various courses. Section 14 of the Irish Universities Act (1997) states that each University will:

> "have the right and responsibility to preserve and promote the traditional principles of academic freedom in the conduct of its external and internal affairs and be entitled to regulate its affairs in accordance with its independent ethos and traditions and to traditional principles of academic freedom".

The Act also emphasises that in implementing their freedom in this regard the University shall take into account:

1) Promotion of equality and access to opportunities.
2) Effective and efficient use of the universities resources provided.
3) Be accountable for their obligations.

Section 47 (1) is more specific on matriculation entry requirements to courses. This section emphasises that the National University of Ireland will determine the basic entry requirements for the Colleges within the National University of Ireland framework. In addition the Act specifically empowers each University to lay down additional requirements generally and for particular faculties of the University. Examples of specific requirements can be seen in respect of particular programmes in U.C.D and other Institutions.

The Regional Technical Colleges Act 1992 governs the Institutes of Technology. Section 5 of the Act sets out that the principal function of the college shall be:

> "the provision of vocational and technical education and training for the economic, technological, scientific, commercial industrial, social and cultural development of the state with particular reference to the region served by the college".

The Act further emphasises that the college will provide such courses of study as the governing body of the college considers appropriate. The Act also states that a college can enter into arrangements with the National Council for Educational Awards and with any University in Ireland approved by the Minister for Education and Science from time to time for the purpose of providing Certificate, Diploma and Degree or other educational awards.

Section 10 of the Act provides that each college shall have an academic council. This council will be appointed by the governing body. The function of the academic council shall be to assist in the planning, co-ordination, development and overseeing of the educational work of the college. In addition it emphasises the maintenance and development of academic standards of the courses and curriculum in the college. Section 10 (d) specifically states that the academic council will:

> "make recommendations to the governing body for the selection, admission, retention and exclusion of students".

The academic council is also charged with the responsibility of making academic regulations subject to the governing body's approval.

Research Questions of this Study

Stakeholders in the education system such as parents, students, teachers and employers believe that subjects such as Business Studies, science and engineering should be a requirement for entry to similar studies in higher education in Ireland. A survey carried out for the points commission (1998) claimed that 85% of students surveyed felt that extra points should be given for subjects relevant to the courses being applied for.

The Aims of this Study

The aims of this investigation are:

To consider the relationship, if any, between LCE achievement and academic performance in Business Studies.

To consider the relationship if any between achievement in the compulsory subjects of Mathematics and English and academic performance in Business Studies.

To identify benefits if any of attempting Business Studies subjects in the LCE.

To advance reasons if students with minimum points achieve better results than students with higher points and vice versa.

Research Questions

The research questions in this study are:

Does students' achievement at LCE indicate achievement at third level Business Studies?

Does students' achievement in the mandatory subjects of English and Mathematics indicate achievement at third level Business Studies?

What are the benefits, if any, of studying Business Studies subjects for students intending to pursue Business Studies at third level?

What explanation do students give for their poor achievement in the LCE and much better achievement in third level Business Studies?

What explanation do students give for high achievement in the LCE and low achievement in third level Business Studies?

Significance of this Research

This research when completed will be of benefit to stakeholders in Irish Education including students, parents, teachers, careers counsellors, and planners. It will attempt to explain the relationship, if any, between LCE achievement and third level achievement in Business Studies. There has been no qualitative research in this area of education to date.

Previous Research

Research by Moran and Crowley (1979), Confederation of Irish Universities (1996), The Points Commission of the Department of Education (1999), Hurley (1989) and others found an imperfect correlation between second and third level academic achievement. Such research findings have serious limitations for the prospective Business Studies student. Firstly they are not based on Business Studies students but a cross section of students from various disciplines. Secondly they are mainly based on University students, thus ignoring Institute of Technology students in the other side of the binary sector. Thirdly they are quantitative studies which do not investigate the reasons for imperfect correlations. This study will use both quantitative and qualitative research in attempting to answer the research questions.

Outline of Thesis:

Chapter I provides an introduction to the research.

Chapter 2 gives a profile of the C.I.T and the curriculum of the Business Studies programme, part and also deals with quality assurance procedures.

Chapter 3 focuses on published research including research on the predictive ability of the LCE for higher education study in Ireland. The influence of prior knowledge of Accounting on University achievement in U.C.D will be reviewed. Research undertaken in the 1960's and 1980's draws on material from the United States, United Kingdom and other countries. Unpublished theses undertaken to study the transition from secondary schooling to third level education will be consulted. The influence of freshmen's pre higher education academic characteristics will be looked at.

Chapter 4 will explain the research methodology adopted in this study. Quantitative and qualitative research methods are used. The process undertaken to obtain data in respect of the Business Studies students in the study will be explained. The analysis and verification of the data will be described. Statistical methods and interviews will be used. The qualitative research approach will reduce the emphasis on statistical aggregates where appropriate and recognise the subjective nature of human behaviour. The disadvantages and limitations of quantitative data as applied in a study of this nature will be explained further. The benefits of qualitative data and how it attempts to add to findings of quantitative data for research purposes will be reviewed.

Chapter 5 will present the research findings. The earlier part of the chapter will present quantitative data in respect of LCE results matched with students outcomes at the end of first, second, third and fourth year which is the award of the Bachelor of Business Studies (BBS). Particular statistical emphasis will be placed on the mandatory subjects of Mathematics and English and the Business Studies subjects of Accounting, Business Organisation and Economics in the LCE. Later sections of this chapter will provide the qualitative findings from case studies and interviews. Case studies will deal with students achieving low points in their LCE and high achievement in third level Business Studies and their counterparts with the reverse profile in academic performance. Interviewees will be drawn from the Technological and University sectors of Irish Higher Education.

Chapter 6 The research findings will be analysed , particularly with reference to Business Studies. The chapter will discuss the entry points and students third level achievement and comment on particular subjects in the LCE. Firstly the mandatory subjects of Mathematics and English and secondly, Business Studies subjects of Accounting, Business Organisation and Economics will be discussed. Finally, the chapter will look at learners' experiences in Irish Education.

Chapter 7 will focus on the conclusions and limitations of the study and address the research questions noted at the start of this research. Finally, the chapter will outline recommendations for further research.

CHAPTER II

PROFILE OF THE INSTITUTE, THE COURSE AND QUALITY ASSURANCE

Introduction

This chapter will present a profile of the C.I.T. The background to the Institute and its mission will be explained. The Regional Technical Colleges Act 1992 and its prescribing of a Governing Body and Academic Council will be recalled.

Secondly, the chapter will focus on the NCBS NDBS, and BBS Degree by outlining the curriculum of the course and how students can progress from Certificate to Diploma and Degree level of awards. This progression known as "the ladder of opportunity" will be illustrated.

Thirdly, the quality assurance machinery will be explained. Of particular emphasis is the quality of the learning environment and resources. The Institute must satisfy the National Council for Educational Awards (NCEA) as to the need for the course. It is particularly concerned with curriculum updating and relevance to industry commerce and services. Finally it details the marks and standards that are in place for dealing with the examination procedures.

The Institute

Cork Regional Technical College (R.T.C.) was established at Bishopstown, a western suburb of Cork City in 1974. Courses in Engineering and Science were already operating at the Crawford Municipal Institute (near St. Finbarres Cathedral). Some Business Studies courses were being provided at the Cork Municipal School of Commerce and

Domestic Science in Morrisons Island. On the opening of the College these courses were transferred there. This distinguished the College from its sister Colleges in other parts of Ireland who had to recruit students and develop courses on their opening.

Legal control of the College was vested in the City of Cork Vocational Education Committee from 1974 to 1992 which was also the case for other R.T.C.'s in Waterford, Carlow, Athlone, Galway, Dundalk, Sligo and Letterkenny. The Vocational Education Committees were directly involved in the appointment of academic and administrative staff, salaries, financial and management controls. Two other third level colleges in Cork city also operated under the City of Cork Vocational Education Committee i.e. the Cork School of Music and The Crawford College of Art and Design.

In 1992 Dail Eireann passed an Act of the Oireachtas (Parliament) entitled "The Regional Technical Colleges Act 1992". This Act established the Colleges as an autonomous educational institution, removing City of Cork Vocational Education Committee from legal and financial control of the College. The Cork School of Music and The Crawford College of Art and Design were constituted as constituent schools of the College within Section 3b of the Act. This extended the College to a multi disciplinary and multi-centre institution.

Following the enactment of the 1992 Act a Committee was established in the College chaired by this researcher to draft a mission statement. Consultations took place across the main College campus, the Cork School of Music and the Crawford College of Art and Design and across all academic disciplines. The mission statement reflected the inclusivity of all levels and disciplines in the College. It committed itself to serving the industrial social and cultural needs of the Region.

The Mission of the Institute is:

> "To provide a wide range of higher educational opportunities through a variety of levels and modes of study.
>
> To enable students to achieve their full potential within a supportive environment.
>
> To encourage and advance learning, research and creativity for the benefit of the economic, industrial, social and cultural development of the region and the community at large".

The academic procedures and operations of the Institute amplify the principles of the mission statement. These principles includes a commitment to quality across all aspects and activities, by meeting the needs of society through its core strengths of business, humanities, science and engineering.

The Course

The Business Studies course is in three principal parts. The first part is the NCBS which lasts two years full time. The second part comprises the National Diploma in Business Studies (NDBS) in either Accounting or Marketing which has a one academic year duration. The third part is the (BBS) Degree which is also of one academic year duration.

The NCBS aims to provide the learner with a firm foundation in the Business Studies discipline enabling the learner to make an immediate contribution to industry and services. The course will also provide the learner with specialised studies relevant to special professional and vocational career routes such as Accounting and Marketing.

On successful completion of the first year of the programme, the learner will be aware of business life and its wider issues and a sound understanding of the various social and psychological problems that a manager of business might face. Such issues includes the Accounting function, Government and fiscal policies, economic indicators, the organisation of enterprise and the legal environment in which various enterprises have to operate. Cosgrove (2001) claimed that Business Studies courses are designed to make a student familiar with the structure and organisation of Business. Casey and Murray (1993) described National Certificates as courses of two years full time duration with emphasis on applied and practical aspects of a discipline. The Certificate is designed to qualify the students for employment as technicians in fields where this category exists and to seek employment at a similar level in commercial and non-technical areas.

In the second year of the programme a wide range of subjects are provided, and the learner can select the optional areas. However, a candidate may specialise in Accounting subjects which can set a foundation to enter the Accounting profession at a later stage. Marketing studies can be pursued focusing on Marketing management and Marketing research and leading to pursuing professional institute of Marketing studies in later career development. A learner may also decide to pursue a general stream of management and a selected European language.

The third year leads to a NDBS. Students can elect to study for either Marketing or Accounting depending to some extent the subjects studied in year two. The NDBS Accounting and Marketing provides students with a specialised education and training in Accounting and Marketing. A student must achieve a minimum of fifty five percent overall average in the year two subjects to be considered for a place in the third year Diploma course. The curriculum of the Marketing Diploma requires the passing of four mandatory subjects and a project and two elective subjects. The NDBS in Accounting requires the passing of four mandatory subjects and two electives.

The key aim of Certificate and National Diploma courses according to the Points Commission (1999) is:

> "The provision of meaningful and
> relevant qualifications in their own right".
> (Page 120 Points Commission Report 1999).

While the Commission recognises that a course can lead directly to employment they emphasise that there should be more scope for transfer and progression to degree courses. The C.I.T. course described has been operating this practice since its foundation.

Year four enables students to study for a BBS. The BBS is designed as a unique one year "add on" Degree for holders of the NDBS who have achieved the minimum requirements of 55% in the Diploma Examinations. This is known as the 2+1+1 model.

This Degree course provides a broad theoretical understanding of the business environment and enhances the skills of conceptualisation, evaluation and synthesis. (O'Hara 1993). As at the end of year two, a student must achieve a minimum of fifty five per cent overall average in the respective National Diploma studied. The curriculum for this year of studies is four mandatory subjects and two elective subjects. Students who studied for the Accounting Diploma in year three elect to study Financial and Management Accounting in this final year and students who studied Marketing in year three elect to study Marketing oriented subjects. The award of the Degree can be at pass or first or second class honours.

A central feature and characteristic of the Business Studies course at CIT is "the ladder of educational opportunity" which enable students to transfer vertically or horizontally to satisfy their career aspirations. This is demonstrated by transferring from National Certificate to the National Diploma and transferring from the National Diploma to the Bachelors Degree.

Business Studies courses in Higher Education in Ireland provide a variety of areas of the curriculum, modes of study, levels of qualifications and transfer arrangements between different Business Studies courses and institutions. C.I.T. has developed its programmes in a flexible way to enable students to complete their studies at different levels. Appendix 1, "the ladder of progression"(p.202) shows how a student can progress from a Certificate to a Diploma and then to a Degree. This approach facilitates progress through the system to a level of qualifications appropriate to the learners' personal goals.

Many Business Studies students enter the Institute and proceed over two years to the Certificate in Business Studies qualification. From this level students have the opportunity to progress to Diploma level providing they have achieved a merit which is an average of 55% in the National Certificate examinations. Similarly students can progress on to the BBSdegree provided they have achieved 55% average in the Diploma Examinations. Students who do not achieve 55% in the Certificate or Diploma examinations cannot proceed to the next level of award. However, they can continue their studies in other higher education institutions. An example of this is the arrangement between C.I.T and Wolverhampton University in the United Kingdom, whereby students can enter the second and penultimate years at Wolverhampton of a degree course in Business Studies.

To meet the varying requirements of individual learners, the Institute has designed the Certificate, Diploma and Degree in Business Studies. Extensive guidance is provided to individual learners in respect of selecting subjects, and additional bridging studies are scheduled between third and fourth years to assist students with particular gaps in the curriculum followed at that particular stage of their studies.

QUALITY ASSURANCE MACHINERY

The N.C.E.A., re-designated as the Higher Education and Training Council (HETAC) in 2001 is the state body responsible for the co-ordination, development and promotion of higher education outside the universities. The Council fulfils its responsibilities by approving courses and granting and conferring Degrees, Diplomas and Certificates. Since its inception in 1972 the Council has recognised over 900 courses and has granted over 160 awards in the disciplines of business and humanities, engineering and technology and science and computing. The Council was set up by an Act of the Oireachtas in 1979 and consists of members from industry, business, labour, agriculture and education. Monitoring and evaluation of courses in Institutes of Technology is carried out through course evaluations, programmatic reviews, institutional reviews and external examiners (NCEA Reports 1972/2000).

Since the NCBS, the NDBS and the BBS were validated by the NCEA procedures to assure quality covering all phases of the programmes are strictly adhered to and overseen by the Academic Council provided for in the Regional Colleges Act 1992. A submission for full evaluation of the new programme containing the following information is a prerequisite:

Aims and Objectives.

Learning Experience and Assessment.

Curriculum .

Learning Outcomes.

Syllabus.

Methodologies for Assessment.

Staff Allocation .

Physical facilities in the Institute.

Details of academic staffing.

Approved Course Schedule.

Examination Marks and Standards

Examinations and Awards requirements are of particular significance to this study. To be admitted to examinations or other tests in respect of courses of study or instruction approved by the N.C.E.A., only candidates who have satisfactorily attended or otherwise pursued or followed the prescribed programme and met all course requirements includes satisfactory completion of prescribed course work and projects within the specified dates.

An NCBS, NDBS, BBS, or any other award shall only be granted on the basis of a candidates academic achievement in his or her examinations or tests of knowledge or ability which have been set or prescribed by the Council and have been approved and monitored by the External Examiner(s) appointed by the Council. In this regard the Council insists that all examination material and continuous assessment material must be available for examination and approval as required by the Council's External Examiners.

Examination subjects in the NCBS, NDBS and BBS in the C.I.T are categorised as either Mandatory or Elective. All mandatory subjects set out in the course schedule must be passed by each candidate. The candidate must also pass the prescribed number of elective subjects.

The minimum pass mark to achieve a pass in any examination subject shall be 40% of the maximum marks allocated for a particular examination subject. However, if a candidate fails to attain the required pass mark in one or two of the examination subjects, the Board of Examiners may at their discretion pass the candidate by compensation. This discretion may be used where the following criteria is satisfied:

- Where the pass standard is 40% in a subject, not less than 35% must have been achieved to qualify for compensation.

- The pass standard must be reached in the remaining subjects necessary to be passed in the examination.

- The subjects passed must produce excess marks above the pass standard equal to double the deficiency in the subject being compensated and all subjects must be attempted.

- Examination achievement: NCBS and NDBS 40% Pass, 55% Merit 2, 63% Merit 1, 70% Distinction. BBS Pass 40%, 2.2H 55%, 2.1H 63%, 1H 70%.

For progression from NCBS to NDBS, a candidate must have achieved an overall average minimum of 55% in second year examinations. To be eligible to progress from NDBS to BBS a candidate must also have achieved a minimum of 55% overall average in the NDBS examinations.

Summary

A criticism of the quality assurance procedures is that it appears to be totally confined to the academic areas. It does not appear to embrace the necessary supports for the academic delivery such as the Institute environment and learning resources. A total quality assurance system as distinct from an academic only quality assurance system is important. Institute environment and learning resources may influence student achievement (Neumann 1989). However, quality assurance is expected to progress further in due course.

Chapter 3 that follows will provide the literature review to the study.

CHAPTER III

REVIEW OF LITERATURE

Introduction

An investigation by Flanagan, Morgan and Kellaghan (2000) reported that there is little research on the operations of Irish Institutes of Technology and consequently Business Studies students in this sector. They also pointed out that research on third level education carried out in other countries that might be relevant to Irish Institutes of Technology are limited. The researcher agrees. In this chapter available literature is reviewed including studies from other countries. In considering the findings, differences between the structure of higher education in Ireland and other countries may limit the relevance of the studies to the Irish context. With this in mind , literature considered to be useful in this research is reviewed.

The principles suggested by Birley and Moreland (1998) to help in carrying out a literature review have been kept in mind in presenting this chapter.

	Birley and Moreland (1998)	**Significant Responses in this Research**
1.	Emphasis on the most important and relevant authors and works.	Significant Irish research and International research is included in this chapter.
2.	Use of up to date sources of information.	Work carried out in recent years including the Department of Education Points Commission research (1999), Flanagan, Morgan and Kellaghan (2000).

	Birley and Moreland (1998)	Significant Responses in this Research
3.	Critical comments where appropriate.	The research methodologies used in previous studies depended mainly on quantitative approaches with little emphasis on qualitative methodologies. This study uses both quantitative and qualitative research methods.
4.	Focus of the research on research.	Focus on the research questions guided the review of the literature in this chapter.
5.	Ask somebody to read the literature.	The chapter presented here has been redrafted more than six times after taking into account amendments and corrections suggested by experienced academics who read the review.

Birley and Moreland (1998) Page 80.

This chapter presents the literature review for this study in seven sections as follows:

Section I Research studies undertaken in recent years on Irish LCE achievement and third level academic achievement;

Section II Studies of academic achievement undertaken internationally;

Section III Entry to higher education courses;

Section IV Experiences that are considered to influence achievement in education;

Section V This section focuses on students failing to complete their higher level education courses;

Section VI Summary of literature.

Section VII Remaining questions.

SECTION I

Research studies undertaken in recent years on Irish LCE qualification and third level academic achievement.

McNamara and Madaus (1969) conducted an investigation into the marking of a sample of 40 answer papers in each of 9 LCE subjects. It was found that there was generally a one in twenty chance for marks to swing up and down by about 10% in each direction. The report concluded that there was a high degree of unreliability in all subjects in the study. However , the study was limited by the small sample size.

A study by Nevin (1974) investigated a sample of 1,053 students, 879 of whom matriculated by way of LCE. It covered the five year period 1963 to 1967. The study found that there was a very significant correlation between passing just science at the end of first year and then obtaining of a degree. She also found that academic achievement improved with better LCE performance. Nevin (1974) further points out that a student is capable of unpredictable behaviour.

A study was carried out by Buckley (1977) of first year students in seven faculties in University College Cork (U.C.C). The study reported that pass rates increased monotonically and approximately linearly with the score. A limitation of the study is that it was confined to first year students only .

Humphreys (1977) expressed reservations about using school LCE results as predictors of third level academic performance and emphasised :

> all studies have unearthed many exceptions - high performance students failing and poor performance students succeeding.
>
> (Humphreys' 1977 Cognitive, Non-Cognitive Biographic and Demographic Correlates of Students' Performance in First University Examinations page 31).

Moran and Crowley's (1979) study concerned the relationship between the LCE and first year university performance. They showed that the pass rate in the first year university examinations increases monotonically with performance in the LCE. However , the study was limited to first year University students.

McCartney (1984) did a study of students who registered in Maynooth College in October 1982. The sample represented students registered in the faculties of science, arts and theology who were studying for their first year examinations. The study concluded that "LCE performance does appear to have a central role in determining first year University achievement".

A study was undertaken by Murphy (1984) on students enrolling in the National Institute of Higher Education in Limerick . The findings of this study includes a significant but modest correlation between performance in the LCE and end of term examinations

In the Department of Mathematics and Computer Applications C.I.T (1984), a test was given to all first year students in October to assess their basic mathematical competency. The results showed that students mathematical performance was consistent with their overall LCE grade in Mathematics.

Hurley and Stynes (1985) reported on a test administered on basic mathematical skills of a sample of U.C.C students. It was felt that a score of at least 20 marks should be expected from competent students. In the event, the average score was 16.7 marks and elementary techniques of conversion of units were answered correctly by as little as 31% of students.

A study by O'Dea (1984) examined the predictive power of the LCE in relation to the examination results of students in the school of engineering in Sligo Institute of Technology. The study showed that the performance in LCE was related to subsequent performance of students in the College in Sligo. Similar to the findings in MacHale (1971), the study found the number of LCE honours related to performance of students in the engineering courses. O'Dea also found that where interviews were taking place for entry to engineering courses, the LCE performance points was a determining factor.

Breathnach (1988) carried out a study leading to a critical appraisal of the Business Organisation syllabus in the LCE. The study points out :

> No third level college requires success in Business Organisation as an entry qualification, or explicitly recommends it as a foundation study. (A dissertation submitted for the degree of Master in Education to Trinity College Dublin by Padraig Breathnach 1988 page 60).

However, the subject is equal to any other subject in attracting points to enter third level courses. The study used Bloom's taxonomy of educational objectives (1956) to weight the cognitive objectives of the Business Organisation examinations.

A study by O'Rourke, Martin and Hurley (1989) used the scholastic aptitude test (SAT) and the LCE to predict first year examination achievement of 458 students in an Irish third level education institution. The findings show that aptitude tests do not add materially to prediction based on LCE performance on its own. Consequently the authors claim that the points achieved from LCE can be considered a general index of academic aptitude.

Walsh and Garvey(1989) undertook a study concerning the relationship between the performance of students in the LCE as a whole and the subject Economics and their subsequent achievement in the subject Economics in first arts in U.C.D. The findings showed that the relationship between points and first arts Economics showed a clear tendency for marks to increase with points. However, a large standard deviation was noted

in the calculations. The study did not track students studying Economics in second and third year in U.C.D.

Clarke (1989) used the 1986/1987 first year class at U.C.D for his study. The study concluded that it was an advantage for the third level Accounting student to have studied Accounting in the LCE. According to Clarke, student's exposure to secondary school Accounting may help to mitigate the drop in failure rate among first year Business Studies students during their most vulnerable times in third level education. A weakness or limitation of this study is that it does not study students in their second year.

Barden (1989) suggests that Mathematics should not be taken as a subject at university unless the student enjoyed Mathematics in his/her LCE studies.

Somers (1992) conducted a research study on the association between prior learning at second level and subsequent academic performance in first year university examinations. Somers concluded that in both Business Studies and engineering studies points in LCE Mathematics are significantly related to first year academic achievement. The research could be criticised on the grounds that it only investigated first year of the Degree courses

.

McGrath (1996) undertook a study on school performance and engineering education. The findings of this study showed that LCE subjects provided high predictability in respect of academic success in first year national Certificate and Diploma in engineering, technology. Students who performed well in first year engineering courses had done well in Mathematics, Physics, chemistry, biology, engineering, or technical drawing in LCE.

The conference of heads of Irish universities (1996) established a committee to report on the points system. It reported that candidates with high points achievement at entry, generally do quite well at university studies. However, the report also emphasise that students with "modest points" are able to achieve Degrees of high distinction. It is clear from the findings that students with lower points could have been admitted and they could have achieved satisfactory performance in their studies.

In August 1997 the Minister for Education appointed a commission to examine the points entry requirements for third level education in Ireland. The findings of the study show that there is a strong relationship between LCE grade point average and higher education performance. The report published in (1999) emphasised that the relationship was not perfect.

The aforementioned studies by Nevin (1974), Moran and Crowley(1979), O'Rourke and Hurley(1989) and The Conference of Heads of Irish Universities(1996) appear to reflect some of the principle findings of the 1999 report of the Points Commission. However, the response sample was small.

Beausang (1977) reported that the selection procedure should give priority to LCE subjects which are most relevant to the specific course to be pursued at third level.

Flanagan, Morgan and Kellaghan (2000) undertook a study of non completion of Institute of Technology courses .With regard to completion rates and entry qualifications the study found that the percentage graduating on time decreases as the number of points decrease. However, the study had a number of serious limitations including a range used of 290 to 525 being too broad and it did not deal specifically with students with Business Studies in their LCE .

SECTION II

Studies on academic achievement undertaken internationally.

The Department of Education and Science in England and Wales provided a grant in the mid sixties to attempt to answer the question as to whether study of Economics at GCE would hamper or hinder the Economics student at undergraduate level. Harbury and Szreter carried out this study and published their findings in 1965. They compared university performance in Economics of candidates who attempted and did not attempt GCE Economics. The overall total statistics show that the average marks achieved in the first university examinations in Economics in the terminal examinations was 49 compared to 47.5 for students without GCE Economics. The findings also show that the study of Economics in the General Certificate of Education proved to be a mixed blessing when the study of the subject at University arose. As indicated by the statistical findings, students with GCE Economics have done marginally better in the marks achieved in their university studies in first university examinations in Economics. The findings of this study are supported by the Walsh and Garvey (1989) study. However, the sample size is small when spread over 13 years and fell as low as 14 students in 1953.

Baldwin and Howe (1981) based their research on secondary level study of Accounting and subsequent performance in the first college course. It was found that students with secondary school book-keeping initially started out ahead, but lost their advantage gradually and scored lower on their final examination than students who had no previous knowledge of the subject. After the first examination the group who had no previous secondary school book-keeping began to catch up and eventually passed out the group who had previous knowledge.

It was felt that students who had studied at secondary school may be lulled into a false

sense of security during that early segment of the course and coast into the later sections. In the later segments of the course they may find themselves suddenly behind. The research concluded that on average college student's having had a book-keeping course in secondary school perform no better in University Accounting classes overall than those student's who have not previously had such a course.

Eskew and Faley (1988) based their study on a course at Purdue University on introductory Accounting. The study found that exposure to Accounting in secondary schooling or pre-third level facilitated student performance throughout the university course. This is interesting when compared to Baldwin and Howe's study referred to earlier which found that it helped performance in the first part of the first year in third level Accounting.

There have been a number of research studies on the relationship between academic performance in second level education and in higher education internationally. According to Peers and Johnston (1994), Chapman (1996), and Hopkins, Newstead and Dennis (1997), their research suggested that students' academic performance in higher education compares with their performance in second level education. However, they also emphasise that the relationship between second and third level academic performance is by no means linear.

Bourner and Hamed (1987), in a large scale study of 24,000 students of the relationship between second level education performance and graduate performance showed that a positive but weak relationship was revealed between Degree performance and A-levels. Four years earlier in 1983 Sear (1983) reported a similar finding that the correlation between degree results and A-levels results was statistically significantly but relatively weak.

SECTION III

Entry to higher education courses is looked at in this section.

Information about Courses

Information on third level courses in Irish Institutes of Technology and Universities is provided through the CAO, the individual higher educational institutions, secondary schools and the media. Institute of Technology Letterkenny (I.T.L.) (1998) suggested:

> there is also an onus on colleges in their published material to provide accurate information to applicants that will enable them to make an informed choice on the career they wish to pursue and the course(s) to follow to help them to achieve this.
>
> (Submission by I.T.L. to the Points Commission No. 75 on the Internet).

Sligo Institute of Technology (1998) pointed out that the information provided by the CAO office should be improved. The Admissions Officers Association (1998) was more specific on the information emphasising detail of previous years applications, the number of places available, the number of students who did not get an offer, the number of students ineligible, and the number of courses on various points ranges.

Student Decision Making Process

The student decision making process to enter Irish Higher Education is a complex one. Many students make their decision when they select their LCE subjects. Some change their mind again later during their senior cycle studies. Others leave their decision to the time of filling up their CAO application forms. Moogan, Baron and Harris (1999) found

that students use parents as well as teachers advice in their decision making behaviour in choosing their higher education course.

Moogan, Baron and Harris (1999) emphasised the risk involved in choosing the right course and the right institution.

> 72% of the main sample and 64% of the control group said they were afraid of making the wrong decisions.
>
> (Higher Education quarterly Vol. 83 No. 3 July 1999 Page 222).

The study also found that the students surveyed were critical of the information provided by Universities. The need for individual course handbooks was emphasised by respondents and user friendly prospectuses were suggested.

Students' perceptions of the Points System of entry to Third Level Education

Students' views on the points system as an entry system to third level education is of paramount importance in considering entry procedures to higher education courses in Ireland. Humphreys and Jeffers (1999) undertook a study on behalf of the Department of Education and Science on Students' perceptions of the points system. Voluntary Secondary Schools, Community and Comprehensive and Vocational Education Committee schools were included in the study.

The findings of the report showed that the vast majority of students (98.3%) had heard of the points system, and ranked the most important sources of information about the system to be career guidance classes 54.7%, guidance counsellor in school 53.8%, friends and other students 25.7%, older brothers and sisters 25.1%, other teachers in the school 22.2%, and newspapers 20.3%.

When the students were asked about their understanding of the points system, 64.3% felt the system was easy to understand and 57.2% indicated that the forms were easy to complete. The report showed a variation of student's level of satisfaction with the points system. The following findings from the study are worthy of note:

> The points system discriminates against hard working students and favours only those with the ability to regurgitate large volumes of information on the day of the exams.
>
> (Humphreys and Jeffers Research Paper no 2 1999 p.17).

With regard to the fairness of the points system :

> A sense of unfairness was expressed in that it seems easier to get high grades in some subjects than in others, thereby regarding those with particular aptitude against others.
>
> (Humphreys and Jeffers Research Paper no. 2 1999 p.18).

The findings also showed that the LCE system did not reward students who worked well in a team (58.9%).

The Commission of the Points System Research Paper no 2 (1999) showed students' concern in respect of lack of recognition for consistent hard work through the five or six years spent in secondary schooling. Concern was also expressed on lack of recognition of involvement in extra-curricular activities, such as music and games. Students emphasised that the system did not look after the interests of weaker students. Another issue raised was the difference in points being awarded for higher level LCE papers and ordinary level papers. The study found that the difference was too great.

In the researchers opinion, the different LCE examination papers are not comparable for points purposes. Examples often quoted are the subjects of English, Mathematics, and Physics compared to what some perceive as easier subjects such as Business Organisation, History, and Geography.

A limitation of the investigation outlined above was that it was confined to schools providing transition year, as a result 200 secondary schools were automatically excluded from the survey. Another limitation is the size of the response rate, one in eight responded (12.5%). This was due to timing as transition students by their very nature are highly involved in activities outside of the school internal curriculum.

Subject choices

The National Council for Curriculum and Assessment (NCCA) (1998) pointed out that there was increasing evidence that students choose subjects for their LCE motivated by the number of points that they can achieve and with a view to the long term of a specific career direction. The Institute of Guidance Counsellors (1998), The Association of Secondary School Teachers in Ireland (1998), and The Teachers Union of Ireland (1998) also support the view that points achieved is the main motivator in selecting subjects for LCE study.

Professional bodies; The Association of Chartered Certified Accountants (ACCA) (1999), The Institute of Chartered Accountants in Ireland (ICAI) (1998) and The Chartered Institute of Management Accountants (CIMA) (1998) support the qualification for entry of Mathematics and English and take it a step further by insisting on a minimum of D Higher or C Lower scores.

The investigation by Cook and Leckey (1999) showed that time management was clearly a problem in the first semester and was foreseen as a continuing problem for students in

first year of their university studies. Although students had entered courses for which they had achieved the minimum qualifications, a substantial minority of students responded that they had difficulties with subsidiary subjects. One student revealed his complete inability to grasp particular concepts in the subject of geometric optics and he found the attitude of his lecturer disturbing.

Some student's transferring from second to third level sometimes do not take adequate responsibility for their own learning. Cook and Leckey (1999) explained it this way:

> The school environment is often one in which there is strong parental and teacher support for students both in advising them how to study and providing resources of external motivation. At university, on the other hand, students are mostly away from home and, because contact hours are fewer, their learning is less structured.
>
> (Journal of Further and Higher Education page 169 vol. 23 no. 2 1999).

The Cook and Leckey (1999) study also concluded that students entering university have inappropriate study skills. The narrow range of subjects at second level does not adequately prepare students according to the study.

SECTION IV

Experiences that are considered to influence achievement in education.

The main cause of failure in university examinations according to Dale (1951) is lack of application to work on the studies required for the course.

Student involvement in the college experience can be an important factor in the students' academic achievement. Astin (1984) presented a theory of student development known as the student involvement theory. He suggested that this theory offered educators a tool for constructing effective learning environments. Student involvement, he claimed, referred to:

> the quantity and quality of the physical and psychological energy that students invest in the college experience.
>
> (Journal of College Student Personnel July 1984 page 307).

Involvement in college experiences takes many forms according to Astin (1984) such as absorption in academic work, participation in extracurricular activities, interests with faculty, and other institutional personnel. The theory claims that the greater the student's involvement in college, the greater will be the amount of student learning and personal development. From the point of view of an Institute of Technology the effectiveness of the Institute's educational policy or practice may be directly related to the capacity of the policy or practice to increased student involvement.

Specific forms of involvement according to Astin are: living on Campus etc: this helps in the areas of student friendships; faculty student relations; institutional reputation and social life. Academic involvement such as working hard on studies develops with good study habits.

Greater student faculty interaction, such as liasing with academic staff, athletic involvement supports the student in various ways in his or her studies. Involvement with student government helps with interaction with peers.

Neumann (1989) presented a concept called the quality of learning experience (QLE). The theory integrates the various approaches into one framework. These approaches are Resources, Content and Flexibility. The quality of learning experience is defined as:

> students' perceptions of the direct and indirect inputs that they receive from their college.
>
> (The Journal of Experimental Education 1989 vol. 57 page 132).

Direct inputs means investments in the educational course of content, resources and flexibility. Indirect inputs are the processes by which the college attempts to enhance the learning situation for the student. According to Neumann (1989) the QLE model consists of two stages. Firstly, resources and content and flexibility of courses have a direct bearing on student faculty contacts. Secondly, student faculty contact and direct college inputs:

> influence the extent to which students become involved in their academic programmes.
>
> (The Journal of Experimental Education 1989 vol. 57 page 133).

Neumann (1989) concluded that attrition for juniors and seniors can be explained as a consequence of demanding learning conditions that do not provide a satisfactory level of support for the student. These supports are quality of learning experience characteristics. Neumann (1989) suggested that the traditional approaches of content, resources and individualised flexible learning tended to treat the student as a kind of "blackbox". On the left hand side of the black box are the inputs such as courses and requirements, and on the right hand side the outcomes such as achievement in examinations and continuous assessment. Underlying the content theory is that student learning and development are influenced by exposure to course content. The resource theory is governed by the

provision of adequate college resources and as a result student learning will ensue. Resources include quantitative and qualitative. The individualised flexible learning approach emphasises electives, self directed learning, self paced instruction and the role of independent study.

A common thread running through all three theories referred to above is that their implementation depends on investments of content, resources and flexible learning methodologies. It follows according to these theories that inputs in terms of investments will produce desired outcomes such as examination achievement and student development. In simple terms then it could be said that the three theories are one sided, that is all investment in the learning process being done by the educational institution. Astin (1984) suggested the theory of student involvement as detailed earlier. This is investment by the student of his or her time and energies in the course.

To summarise research reviewed in this section: the investments by the educational institution of content, resources, and flexibility, are matched by the student involvement in order to produce the desired outcomes. Pascarella (1980) having reviewed 36 studies of educational outcomes emphasised faculty contact as the important link between college investments and student achievement in terms of their outcomes on a course of studies.

Predicting student success in third level education has inherent hazards associated with it. Students will have second level educational experiences but third level education experiences may be very different. At second level students have to study prescribed subjects such as Irish, English, Mathematics and a European Language. This represents two thirds of their subject matter. At third level students select the discipline they wish to pursue. Consequently second level achievement may not give an accurate prediction of third level performance. Students not achieving high points could be misdirected as a result of attempting to predict from second level results.

SECTION V

Students failing to complete their higher level education course.

According to Healy, Carpenter and Lynch (1999) who studied non completion in three Institutes of Technology in Ireland, there was a 37% non completion rate found in their study. Most of these students according to the research study were accounted for as follows:

> (47%) left during or at the end of third term, having failed at least part of their first year examination, a sizeable minority(36%) left in the first and second term before taking examinations.
>
> (Healy, Carpenter and Lynch A Study of first year students in three Institutes of Technology, 1999, Page, 2)

The lowest rate of leaving or examination failure was in the Science discipline and the highest rate was in the Engineering courses.

Of importance to stakeholders in education is the reasons for leaving or failing examinations in third level courses. The report referred to here stated that no single factor described the 37% drop out rate in the three Institutes of Technology included in the study. However, the authors emphasised that:

> A range of academic, social, personal, financial, and institution-specific variables seem to contribute to early leaving and/or failure.
>
> (Healy, Carpenter and Lynch (1999) A Study of first year students in three Institutes of Technology, Page, 1)

The principal social and personal factors related to non completion were:

> low grades in the LCE ; unclear career aspirations; lack of information and guidance on courses and career options; unsuitable career choices; difficulties with some or all of the subjects taken, and financial and work related problems.
>
> (Healy, Carpenter and Lynch (1999) A Study of first year students in three Institutes of Technology, Page, 1)

The main reason indicated by students for dropping out of courses in the three Institutes of Technology was their desire to pursue a different career choice. It was found that almost all of the students who had left were involved in other occupational and educational areas.

The Points Commission Report of the Department of Education (1999) reported that non completion patterns varied significantly between the University sector and the Technological sector of higher education. The findings also showed:

> while more students left the University sector after passing first year examinations than for any other reason, this was the least important factor in the Dublin Institute of Technology or Institutes of Technology.
>
> (Report of the Points Commission 1999 page 38).

SECTION VI

Summary of Literature.

A synthesis of the literature cited in this chapter identifies a number of threads or the absence of them in the findings of research studies. These threads can be summarised as follows:

1. Students who do well in the LCE correlate but not perfectly with the performance in third level first year courses. Studies in the United Kingdom also show that achievement in advanced level subjects do well in their university examination performance **(Moran and Crowley (1979), The Conference of Heads of Irish Universities (1996), Bourner and Hamed (1987) and Sear (1983).**

2. Predictive studies show consistently that the correlations are not perfect. Consequently some students who do badly in their school examinations do well in their university examinations and students who do well in their school studies sometimes do badly in their university examinations **(Moran and Crowley (1979) and The Conference of Heads of Irish Universities (1996).**

3. Students who study Accounting in their LCE perform better in Accounting in first year in at least one Irish university than students who had not attempted the subject in their LCE. Research in America and other countries supports these findings **(Clarke, 1989).**

4. Students who study Economics in their LCE do better in Economics in their university examinations than students who did not study Economics in their LCE. British research studies show similar findings **(Walsh and Garvey, (1989) and Harbury Szreter (1965).**

5. Nearly all the studies have been carried out on university students and with one or two exceptions only on non university institutions **(O'Dea, 1984)**.

6. Although 50% of Irish third level students are in Institutes of Technology no published research could be found in respect of Business Studies students in these institutions **(NCEA and Higher Education Authority Reports (HEA) (1999/2000)**.

7. The research methodology used in the studies described in the research literature are quantitative based. None of the studies used qualitative research. Therefore, the findings in these studies suffer from some limitations. **Moran and Crowley (1979)** refers to some of these limitations in their research findings.

8. Statistical prediction studies have made no effort to find out why low LCE achievers sometimes do well in university examinations and students who do well in their LCE do badly in their university examinations **(Moran and Crowley, 1979)**.

9. For students studying Business Studies subjects in their LCE , there appears to be no research carried out on the benefits, if any, to the students other than examination results in the related subjects **(Clarke, 1989, Quantitative Study only)**.

10. Research undertaken relating to students with prior knowledge of Business Studies subjects have not shown if such students have developed good or bad habits when pursuing their Business Studies courses in third level colleges **(Clarke, 1989, Quantitative Study only).**

11. In the process of selecting a higher education course, a criticism of the information provided by the higher education institutions is the lack of quality information. In addition there is an undue emphasis on sales and Marketing of courses. An important matter for many students is the pass and fail percentages in particular courses and subjects **(I.T.L, 1998, and Admission Officers Association, 1998)**.

12. Selecting the wrong courses leads to waste of time on the part of the student and frustration **(Moogan, Barron and Harris, 1999)**.

13. The points system of entry can be unfair to some students and it does not consider the entire curriculum, examples of this are involvement in public speaking, sports and athletics, school committees and public relations etc **(Humphrey's and Jeffers, 1999)**.

14. LCE subject choices appear to be influenced by Higher Education Institution and Professional Bodies requirements and the amount of points that can be obtained, rather than the importance of the subject itself **(CAO (2000), NCCA (1998), ACCA (1999), CIMA (1998) and ICAI (1998))**.

15. The Higher Education system in Britain differs from the Irish one in that it can offer places on courses on a provisional basis before the applicants attempts their second level examinations, whereas the Irish system offers places after the results of the second level examinations are available. In addition the British system requires three subjects and the Irish system requires a minimum of six subjects from second level results **(Points Commission, 1999)**.

16. Students perceive differences between second and third level education particularly in respect of the shorter third level academic year, supervision of studies at second level not available at third level, living away from home during third level studies,

time management during third level studies and the new study skills required to study at third level **(Moogan, Barron and Harris (2000) and Cook and Leckey (1999)).**

17. To obtain a third level educational qualification is considered to be an important motivating factor to study. Personal commitment of the student can override many students problems. Personal and family difficulties often have adverse effects for the student **(Neumann (1989) and Astin (1984)).**

18. Student involvement in college appears to lead to a greater amount of learning and personal development. This involvement includes living on campus, liaison with academics and fellow students. It is not always what a student brings from second level that matters **(Astin, 1984).**

19. The education institution needs to place emphasis on investment in content, resources and flexible learning methodologies **(Neumann, 1989).**

20. Attendance on the one hand and absences on the other appear to influence academic performance at third level. There is a view that there should be a minimum attendance requirement for eligibility to sit examinations **(Unpublished notes of various C.I.T academic meetings).**

21. Certificate, Diploma and Degree courses have different attrition rates. The highest attrition rates are found on the first year of third level courses with significant reductions in years two, three and four **(Healy, Carpenter and Lynch, 1999).**

22. Low LCE grades, particularly in Mathematics and failure in first year are important reasons for third level attrition **(C.I.T, 1984).**

23. Institute of Technology students who dropped out of courses claimed that the course they were offered was not one of their first or second preferences and accepted the only course available to them. This mismatch is not an effective use of higher education resources from either the Institution's point of view of the students **(Healy, Carpenter and Lynch, 1999)**.

24. International studies on student achievement, have been unable to find perfect relationships between entry qualifications and achievement. Similar findings are evidenced by Irish studies **(Bourner and Hamed (1987), Peers and Johnston (1984), Chapman (1996), Hopkins, Newstead and Dennis (1997), Moran and Crowley (1979), The Conference of Heads of Irish Universities (1996) and the Points Commission (1999))**.

SECTION VII

REMAINING QUESTIONS

The survey of literature leaves the following questions open for investigation :

Does students' achievement at LCE indicate achievement at third level in Business Studies?

What explanations do students give for their low achievement in the LCE and higher achievement in third level Business Studies?

What explanations do students give for their high achievement in the LCE and lower performance in third level Business Studies?

What are the benefits, if any, of studying Business Studies subjects for students intending to pursue Business Studies in third level?

The next phases of this research will address these issues by undertaking :

- Quantitative analysis of student achievement in the LCE and their academic achievement in Business Studies over four years.

- Qualitative research by interviewing students on the Business Studies course and interviewing of students on other Business Studies courses from the University sector in Ireland.

The research methodology will be considered in the next chapter.

CHAPTER IV

RESEARCH METHODOLOGY

Introduction

In pursuance of the aims of this study, this chapter attempts to describe relevant research methodologies. The literature review in chapter four provides information on previous important studies. However, a search of the literature did not reveal any studies of Business Studies students in the Technological sector of Irish Higher Education. A personal letter in response to my investigation from the Professor of Business Studies at the University of Dublin Trinity College echoes this:

> I am not aware of any study investigating the correlation of LCE BO grades and performance in third level Business Studies Courses. The one correlation which seems to have shown up over the years is between Mathematics at LCE and general first year higher education performance.
> Yours sincerely
> John A. Murray
> Professor of Business Studies
> Head of School
> University of Dublin, Trinity College Dublin

It is hoped this study will remedy this deficiency in the literature.

The research methodology chapter is presented in eight sections.

Section I Objectives of the study.

Section II Quantitative and qualitative research methods.

Section III The pilot study.

Section IV The subjects of the study.

Section V Data collection and processing for this investigation.

Section VI Validity and reliability of the study.

Section VII Research methods and their application in this study.

Section VIII Summary of the chapter.

SECTION I

Objectives of the study and the research questions.

Objectives of this Research

Brannick (1997) suggests that the research problem "is the starting point of all research". Research questions according to Brannick can relate on the one hand to existing problems where it is felt things may be improved or on the other to a theoretical puzzle that needs clarity. The process of developing the research question commences with setting out the research area followed by the research question. This then dictates the issues to be investigated in order to solve the problem and present the findings to the research study. Brannick emphasises the findings of "what is a valid understanding of explanation". She further points out that knowledge is a cumulative process moving from "what" questions to "why" questions. Nolting (1979) claims that "why"? is the most profound question of all. Brannick supports this view and explains that a properly formulated research question includes some element of "why" or "how'.

Many prediction studies in Higher Education such as Moran and Crowley (1979), Clarke (1989), Hurley and O'Rourke (1989), have been based mainly on quantitative methodologies only. A major part of the current study will involve qualitative methodologies.

The following letter received from a second level student in December 1999 illustrates the issues central to the research problems investigated.

Address of
sender kept for
confidentiality

"1st December, 1999.

TO WHOM IT MAY CONCERN

I am currently a LCE student and after my exam in June 2000 I would like to further my studies. I have a keen interest in Business and would appreciate it, if you would be able to help me with the following queries:

- I have no Business Subjects for my exam but I do have Junior Cert. Higher Level Business Studies in which I received Grade B, would this affect my course choice?

- Are there any special subject requirements for the course CR021?

- In reference to course CR022 what are the special subject requirements for progression to Diploma and degree level?

- My subjects include Higher Level French, German and Ordinary Level Maths.

Which course would you recommend for me?

I would be very grateful if you could forward me this information as soon as possible.

Yours sincerely,"

Name kept for confidentiality

The research objectives should be described as precisely as possible. (Aaker and Day (1990). The research focus of this study is to study Business Studies students with the objectives emerging from the research problem.

1. To determine the relationship if any between points at entry and subsequent achievement.

2. To determine if there is a relationship between the required subjects for entry to the course and subsequent achievement.

3. To determine if there is a relationship between achievement in Business Studies subjects in the LCE and third level achievement.

4. To attempt to explain why some students with high points perform poorly and conversely with low points perform very well in first and second year.

SECTION II

Quantitative and Qualitative Research Methods

This section of the research methodology is structured into three parts:

Part one - research approach.

Part two - research design.

Part three - qualitative and quantitative approaches.

Research Approach

It is incumbent on the researcher, before selecting any research methodology, to engage in an examination of the various research methods that may be the most useful for his/her purpose, because the research approach employed in any proposed study is governed by the objectives of the research. With this in mind , the most important consideration by the researcher in selecting a particular approach is to examine a number of possible research methods that might be employed in order to arrive at the most appropriate one for his/her study (Buckeridge 1997).

The writer wishes to accumulate information from present and past students regarding their perceptions and experiences. It is hoped that by drawing on these experiences that he will be in a position to apply them to the development of the findings in this study. Sparhaw (1994) suggests that "each person that you involve in your needs analysis becomes a partner in shaping the solution." (Sparhaw, Sally 1994 p. 23). Data collected from the research will be the observations of the respondents through whatever appropriate research approach is to be selected and will, it is understood, be subjective in nature.

Research Design

In planning and designing a research study , a number of items must be considered. Whilst no one item is more important than another it is fundamental in the writers' view that there be a reason for undertaking the research. Travers (1964) advises researchers to be aware that the identification of a problem is fundamental to the nature of research. He also suggests that the research should be:

- Limited in scope.
- Consistent with known facts.
- Expressed in simple terms.
- Amenable to conclusion within a reasonable time.

The limit of instruments available to the qualitative researcher can in theory be limitless. Hopkins, (1980 p. 294) notes that "ways to observe the real world are without limit ..." In this instance the writer is concerned with establishing criteria that will be necessary if he is to elicit the information required. The criteria should be based in the first instance on the necessity to identify the objects of the research. The researcher will need to test the selected research method in order to determine its appropriateness to this study by use of a "pilot" testing process. This testing process will, it is hoped result in a refining of the research methodology. Having identified these criteria it is also necessary to select a time frame complete with critical points.

Easterby-Smith et al (1991) suggested that "research design" extends beyond research methods. This includes the evidence gathered, from where it is the interpretation of the evidence and the provision of answers to the research question. Buchanan (1980) claims that the researcher must be ready to bring his own judgement to bear on the study. He claims that this is of vital importance in the research. He emphasises the benefits of

conducting research by researchers with experience of the philosophical and political issues of the subject matter being studied. The researcher in this study meets this criteria.

Qualitative and Quantitative Research Methods

Kane (1983) explains how research techniques complement and support each other emphasising that "no one technique duplicates exactly the function of the next". Each technique provides information that it can specifically obtain but it reinforces the other methods. Triangulation demonstrates the use of many techniques by using the same data through different strategies in order to verify and strengthen the validity of the researchers results. Therefore triangulation uses several theories or perspectives to examine the same material. The scope of this study necessitated the use of more than one research method. Denzin (1978) suggested that more than one researcher, indeed several people would be required to do an observation of the same situation. Kane (1983) suggested that the use of research techniques are a "bit like fishing flies". The right one should be selected for the fish you wish to catch. Kane further illustrated "no fisherman would use the same type of fly for twelve different varieties of fish."

Brennan (1998) notes "if a study adds a little brick to the research wall it will have achieved its purpose or objective". Hopefully the research that follows contribute its "little brick".

Qualitative methods help in the understanding of people and viewing them as developing their own ideas of the world. Bogdan and Taylor (1975) suggests that personal experiences are similar to experiences in the struggles with society.

Marshall and Rosman (1989) emphasise the challenge to researchers of using qualitative research as distinct from quantitative research methods. There are no absolute guarantees

in constructing the research findings. Geertz (1973) demonstrates that "thick description" and comprehensive analysis will describe the research processes undergone. Guba and Lincoln (1981) suggests that qualitative research has an advantage over statistical methods if the study is complex and has behavioural interactions and not conveniently communicated in the form of numbers. However, qualitative research methods are not without their disadvantages. Apart from the labour intensive nature of the work involved, there may be difficulty with interpretation and analysis. According to Easterby-Smith (1991) policy makers did not rank qualitative findings very high for research purposes. McCracken (1982) believes that the reservations of researchers in respect of qualitative research are disappearing as time moves on and management research is changing and developing further.

Two points arise according to Bennett (1991) in selecting a research methodology to fit a particular study. These concern themselves with exploring if the research relates to (1) what might be or (2) what is.

Qualitative research concerns itself mainly with unstructured data. This refers to a variety of data that has not been systematically coded when it was collected. The information is often recorded on open ended notes and reports as it can be rather difficult to code peoples' behaviour into particular specification. Informal conversations are a form of qualitative interviews. The interview methodology covers a small number of cases rather than a large number which would involve a different methodology to investigate.

The case for using qualitative research in addition to quantitative research in this study

The prediction studies carried out in Ireland and identified in the literature of this study are all based on quantitative research methods. These studies includes Moran and Crowley (1979), O'Rourke and Hurley (1989), McGrath (1996), O'Dea (1985), Brannick (1998), Murphy (1984) and Somers (1992).

In addition to quantitative research , the research that follows sees a number of advantages in considering the use of qualitative methods. Hamilton and Parlett (1977) suggests that the researcher using interpretative human skills and insights becomes an "illuminative evaluator". Partlett describes the qualitative researcher as joining a diverse group of specialists like psychiatrists, social anthropologists and historians, by whom the use of interpretative, human skills and insights is taken for granted". Douglas (1985) emphasises an important warning in respect of the freedom of qualitative research and suggests "every effort must be made to avoid its abuse". The interviewer or observer must use a collection methodology that takes elements of bias into consideration. The user of the research must also be borne in mind and to facilitate this the research evidence should be persisted so that the reader can validate and evaluate the conclusions using his/her own experience and assumptions. Ethnographic research is a general research strategy and according to Hamilton and Partlet (1977) is an approach which utilises a number of different indicators to reflect on a single research problem. Different researchers explain this in different ways. Denzin (1978) describes it as "multiple triangulation" whereas Glasser and Strauss (1967) explains it as the collection and comparison of many different "slices of life". It follows then that the researcher is not confined to a specific research methodology. According to Douglas (1985) if additional information such as numbers, facts etc. are required he is free to use questionnaires or documentary evidence.

SECTION III

The Pilot Study

The pilot study according to Rowntree (1981) is a preliminary study carried out before the major investigation. The results of the pilot study provides an opportunity to vary the research methods of the study. Piloting should reveal any inherent problems with the data. The subjects of the pilot study for this investigation were students registered for the (NCBS) course in the eighties and nineties.

Questionnaires, data from registration records and interviews were used in the pilot study and will be explained. The explanations are brief due to the limitation of word length of this study.

Questionnaires

When the CIT students returned to register for second year of the NCBS in September 1997 a questionnaire was administered to them. They were asked to complete the questionnaire in the lecture theatre leading to a 100% response rate. An important question on the questionnaire was for the student to provide the exact results achieved in the LCE. This was important because the data would be used to compare any academic achievement from second level studies to third level.

An audit check was carried out to verify the accuracy of the questionnaire responses. This was done by examining the internal records of specific students and comparing the information given on the questionnaire with the internal student records. The LCE achievement on the internal records is the information provided by the Department of Education to the CAO for calculation of the points.

The results of comparing the questionnaire with institute records showed many errors. A number of responses indicated a B or a C higher in the LCE whereas the internal record showed a C and D respectively. Other errors were giving C1 instead of C3 and D1 instead of D3. Another serious error was indicating subjects that the student had not attempted at all in the LCE. Many errors found showed a better result on the questionnaire than the real result by the Department of Education. It appeared students had either forgotten their results or would like to show a better record than they actually achieved.

As a result of this experience it was concluded that the questionnaire was not a suitable method for collecting this information as 100% accuracy of LCE achievement was required for the investigation and as a result the questionnaire method was abandoned.

Data from Student Records

Data for this pilot study were drawn from private Institute records of over 100 students who obtained entry in the eighties to the two year NCBS course in the Department of Business Studies at CIT (known then as Cork RTC). The cohort of students in the 1990's merited selection for research for various reasons including:

(a) No research of this nature could be found for this period in Ireland.

(b) The quality of sources of information.

(c) A cohort of entrants prior to the implementation of the Central Applications System.

(d) Potential for major longitudinal research.

The exploratory nature of the study highlighted the need for further research in this expanding and fast changing area of third level education.

Information concerning the LCE profile of entrants was extracted and tabulated. The official form completed by each individual candidate and submitted to the NCEA was carefully examined and LCE subjects and grades extracted. In addition to points, honours and business subjects, of particular importance were the subjects of English and Mathematics. The reason for selecting these subjects was that they are set out as essential requirements for entry to the course, (reference CIT and CAO handbooks (1998)).

Accounting was selected because the subject is mandatory in first year of the NCBS course. In addition the curriculum of the LCE Accounting appears to repeat itself significantly in the first year of the CIT programme of studies.

It was also felt that the number of Business Studies subjects might influence achievement in the course. The number of business subjects for this study were defined as Accounting, Business Organisation and Economics at either pass or honours levels. A student could have attempted one , two or all three of these subjects. Very few candidates would have attempted more than two subjects as Mathematics, English, a continental language and Irish are almost mandatory in secondary schooling throughout the country.

Corresponding results in the subsequent first CIT examination held at the end of the academic year were obtained with results extracted from the official broadsheets of results for each candidate. All results had been finalised by both internal and external examiners and ratified by the National Council for Educational Awards (NCEA). The NCEA is the official accrediting body who awards the qualification in respect of this course.

The data was carefully transferred to analysis sheets by the researcher of this study. In the interests of confidentiality, students' names were removed and replaced by code numbers. It was decided that the study should apply to students who had entered CIT for the first time thereby eliminating repeat students. Other students, as for example, mature students

and foreign students who had not taken the LCE, were omitted. Another category of students omitted was students who left the course during the academic year and did not sit the terminal examination at the end of first year.

Although students are only required to pass in first year, that is to achieve 40% in each subject, it was thought that it would be useful to use the NCI criteria. This criteria is 240 to 359 equals a pass, 360 to 419 equals a credit and 420 or over is equal to a distinction. It was felt that these would be goals the students would be aiming at.

As the study would by its nature present a large volume of complex statistical data it was felt that the first year of the course would be studied in this research.

Researchers such as Yin (1984), Otley (1998) demonstrated that research findings should be capable of being replicated. If another researcher matched the quantitative data in this study there is no reason why the same results would not be replicated. Therefore, the study, although limited to first year of one academic year, satisfies the criteria set out by Yin, Otley and others.

Otley (1998) explains that "changing of practice is a valid research objective". The findings of this study may present information to change/improve practice. An example here is the case of students who did not attempt Accounting in their LCE. Do they do better or worse than fellow students who do? Such students may need bridging studies or computer assisted learning in the first term to bring them up to speed with students with secondary schooling in Accounting.

Interviews

An important consideration was the timing of conducting interviews with students. One choice was to interview students during their studies and another was to interview them after completing the course and receiving their terminal examination results.

In helping to make the decision on this, a sample of students were interviewed during February and March1998. The interviews revealed that the students being interviewed had limited third level education experiences. They had a wide experience of second level education as they had spent five years studying for their intermediate and LCE examinations. One of the students interviewed indicated that he was not sure how important attendance at classes was to support his studies. When questioned on this, he explained that his brother had attended third level in a University and attended very little classes and passed his examination at the end of the years and obtained his degree. Another student felt he had made an unwise decision to accept the offer of the course in Business Studies. It was his fourth choice when he made his CAO application during his LCE studies in secondary school. He thought he could transfer to another course in engineering and was obviously unclear on the regulations concerning offer and acceptance of course applications. When questioned as to where he got the idea of being offered a fourth choice and accepting it thinking that he could manoeuvre a transfer to the course of his first choice, he explained

> "a friend of mine some years ago who did not achieve enough points from his LCE results accepted the offer he received and abided his time on that course until a vacancy arose in the course of his first choice and then got a transfer".

Some of this faulty information appears to be a legacy of the system of entry prior to the Central Application System introduced in the early nineties. In the eighties when the Institute was making its own admission arrangements a small number of students who entered courses that they later found they did not want to pursue were helped in many

ways including transfer to another course if vacancies arose. However, the subsequent rules for entry to courses under the CAO system are much more strict in such matters.

Another student simply left the course after the first term. This student returned to secondary school to repeat his LCE. He explained that he could not keep up with the lectures in many subjects such as Economics, Accounting and Business Mathematics and Statistics.

Further elaboration of the pilot sample of students who had completed the two years reached the following conclusions. The first interviewee explained how he studied and made studies a priority not just coming up to examinations but throughout the academic terms. He cited a number of his colleagues who put little into study during term but "crammed" their studies within six weeks of their examinations. None of these students he claimed achieved much more than a bare pass in their examinations and some failed their examinations. The second interviewee emphasised the importance of taking only a small number of working hours in a part time job as too many working hours cuts down study time and energy to study. The third interviewee felt that it took her the first six months of the course to come to terms with third level studies. She also pointed out the difference in the academic year between secondary school and third level. In third level she explained the academic year was about two months shorter: for example starting on first week October instead of first week of September in secondary school and finishing attending lectures on first week of May instead of first week in June in secondary school. All three also pointed out how they had to decide on their electives for their second year of the NCBS course.

Final changes for the main research as a result of the pilot study

The pilot study highlighted a number of changes which were made in carrying out the research study. The following is a summary of the changes:

Quantitative Data

1. The use of a questionnaire to mainly collect quantitative data about students entry requirements and outcomes after first year was not used in the main study. This was due to errors detected in the completion of questionnaires by students. Typical errors were LCE results. Instead registration records which provided accurate information were used in the main study.

2. Because of the much larger volume of quantitative data being used, it was decided to use the Statistical Package for the Social Sciences (SPSS).

3. The paper trail for all data was audited before keying in the information to the computer.

4. In comparison to the pilot study many additional analysis columns were added to provide a more extensive set of data analysis.

5. Changes in the points system had to be taken into account.

Qualitative Data

6. Qualitative questions on the interview schedule were changed. Instead of a question reading " Explain" it was changed to " Explain in detail" because it was found the interviewees were providing too brief answers to questions.

7. Specific detail was provided in questions i.e. Instead of " How would you quantify your average attendance?" as in the pilot study the following was added to the question: less than 50%, 51 to 70%, 71 to 90% or over 90%.

8. Experience from the pilot study indicated that more probing should be used. A typical probe was "Could you elaborate further on this?" "Could you comment further on your answer?" "Would you like to clarify?"

9. A more detailed open ended section was provided in the main study. This allowed respondents to talk freely about their experiences.

SECTION IV

The subjects of the study.

(I) Quantitative Study

The subjects of the present investigation comprise a total population of CIT students who registered for the NCBS in the period 1996/1997. A group of over 200 students formed the basis of the quantitative section of the study. The course is administered and delivered in the Department of Business Studies in CIT (formerly known as Cork RTC). All students studied for the LCE of the Department of Education in Irish secondary schools. Mathematics and English or Irish were laid down as mandatory subjects to be passed in the LCE to qualify for entry. The three Business Studies subjects, Accounting, Business Organisation or Economics were not a requirement for entry to the course.

This course was selected because it was a sufficiently large group in CIT in which all students were offered the same academic curriculum in first year, second year, third year and fourth year of the course. Group homogeneity was considered necessary in order to minimise any course differences. Selection of this course also ensured maintenance of comparability across entry standards and previous educational experiences.

It was felt important to the study to take two cohorts of the same course five years or more apart for a number of reasons. The eighties entrants were selected by a college system as the CAO for RTC's was introduced in the early nineties. As a result of taking these particular years the investigation studied students selected by two different systems although applying a points system to both.

(II) Qualitative Studies

Case Studies

The statistical analysis used in the quantitative section of this study provided the framework for the case studies. Ten students were selected from the data. Five of the students had low entry points and the other five had high entry points.

Gillham (2000) explains that a case can be an individual, a group, a class, an office, a hospital ward or an institution. The case study investigates the above to answer particular research questions. Gillham further explains:

> "No one kind or source of evidence
> is likely to be sufficient (or sufficiently valid)
> on its own".
> (Page 2 Case Study Research Methods,
> B. Gillham, Continuum London).

In this investigation, multiple sources of evidence used included CAO information, analysis of broadsheet results at end of each year in third level and interviews. The CAO information provided authentic details of LCE results and the points awarded to each student. The analysis of broadsheet results provided the results for each subject at the end of each year from NCBS, NDBS to the BBS year 4. These results followed validation by the external examination system of the NCEA for each candidate. The interviews elicited responses from the participants feelings about their educational experiences. Students with low points from their LCE achievement and high academic performance in third level Business Studies and the reverse in respect of students with high points and low academic performance at third level are fundamental characteristics of the case study participants.

Gillham points out that quantitative data extends the range of evidence on the matter under investigation. The input data in respect of LCE results and CAO points awarded and the

output longitudinal data in respect of examination results in years one to four cross references the internal validity of the case studies in this research.

Interviews

It was planned to interview one hundred students from Business Studies courses. (Appendix C). Institute of Technology students with and without prior study of Business Studies subjects in their LCE will be studied. Students from eight Universities North and South of Ireland and a Private College will participate in the study. Finally, a focus group including a total of thirty seven students will be interviewed.

Participants and their Confidentiality in the Study

In carrying out "people" research, the researcher has an obligation to preserve the information entrusted with absolute confidentiality. Begley (1998) in her study of student midwives emphasised that this is a very important issue which cannot be overstated. According to her research it is not enough to be merely confidential, the researcher has to be seen to be confidential. Her study also pointed out that some excellent data cannot be disclosed, if it would mean that a participant in the study could become known. The researcher has to weigh the need for quality data with the need to ensure the confidentiality of the participants in the study.

There are many occasions in this investigation when students talked freely about particularly experiences on their journey in second and third level education. If there was any possibility of identification of a student, such responses were not described in detail in case the student could be identified.

Great care was taken that the identification of student's being interviewed could not be identified in the findings. In the case of any communications made by the researcher, emphasis on confidentiality and privacy was exercised when leaving names or messages with third parties.

At the start of the study, all names of students were removed from the quantitative data schedules. Numbers were used for matching purposes. With regard to the qualitative information recorded from interviews, names of respondents were not recorded on the interview sheet.

The researcher was unable to find any Irish study based on interviews with Business Studies students and consequently had to work with the disadvantage of not having any methodology benchmarks to compare with.

SECTION V

Data collection and processing for this investigation.

Access to Information

To undertake this investigation a wide range of data is required. The two main requirements are:

1. The LCE results. These results are required for each subject attempted and the exact grade awarded i.e. English Higher C2. Student number or identification is also essential.

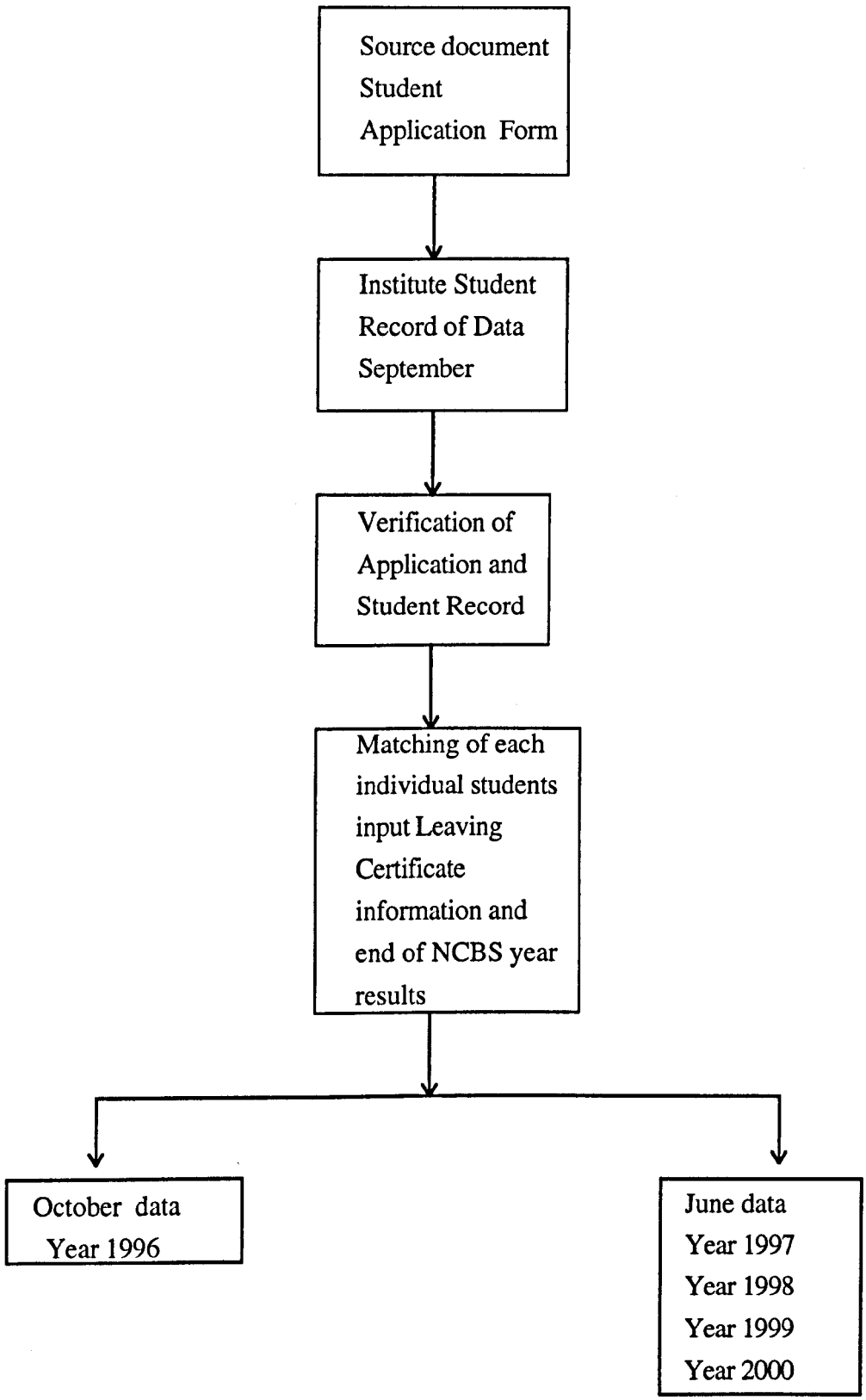
2. The achievement obtained in first, second, third and fourth year of the NCBS, NDBS and BBS. The final results for each year externally assessed by the NCEA was required. (Figure 1 illustrates the processing of the data).

Where the researcher was not satisfied as to the accuracy of the information, after various checks, individual students were excluded from the appropriate section.

The quantitative information referred to above is treated as strictly private and confidential by higher education institution. Consequently such institutions will not make it available for research purposes. Each student will have their own individual information such as their LCE results and the NCBS results from the Institute. However, students would not know the individual results of their fellow students on the course, unless the student himself or herself disclosed the information.

FIGURE 1

STEPS IN PROCESSING DATA FROM PRIVATE RECORDS



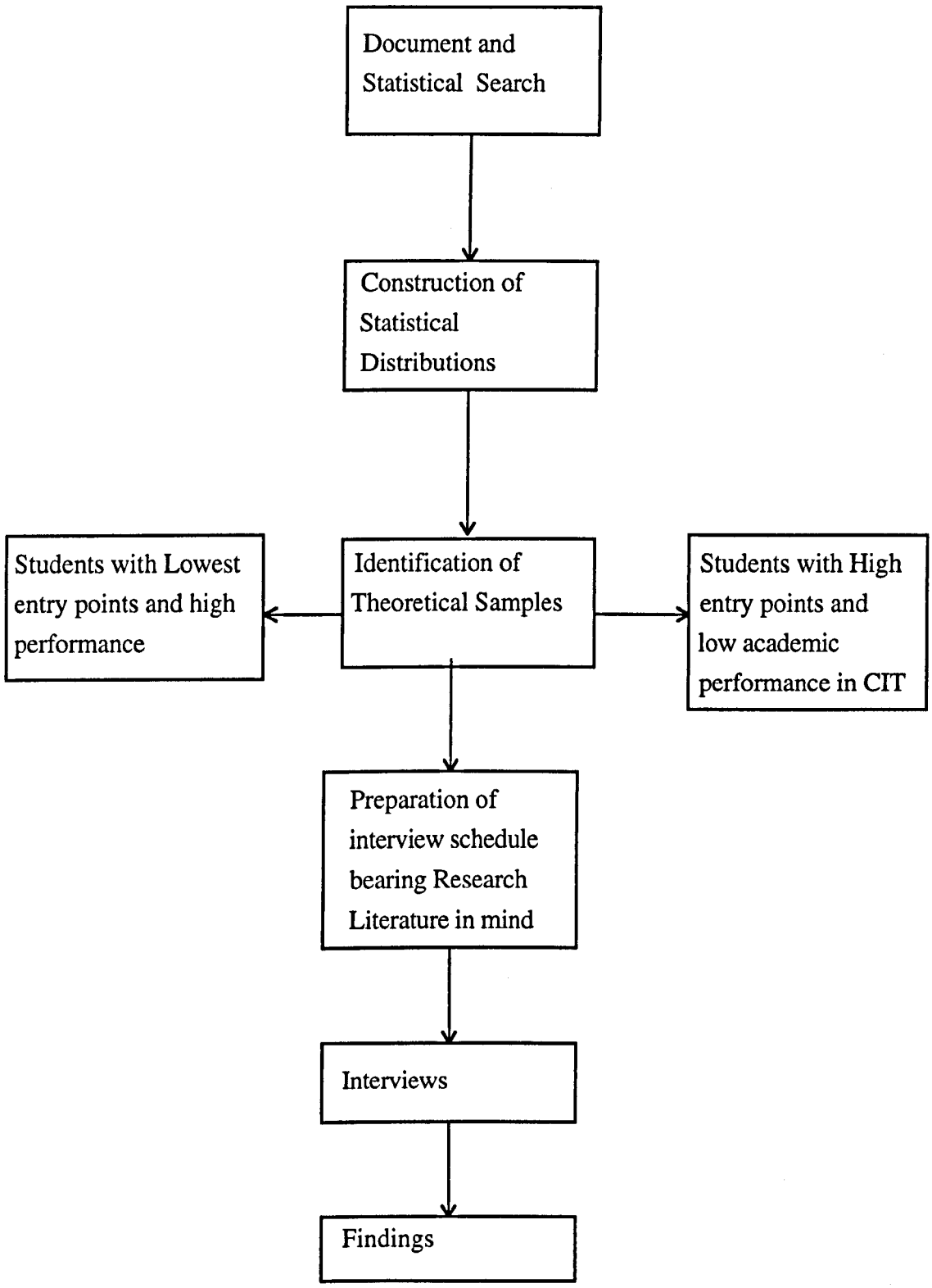
This study then can only be conducted by a person with access to the information. This researcher is in a unique position as Head of Business Studies in CIT. Access to the exact LCE results is available through reports from the Examinations and admissions office. Access to the NCEA results takes place through the researcher's function in organising examination returns, communications with the internal and external Examiners and Secretary to the Examination Board. As stated earlier, a questionnaire was attempted and failed to recover accurate information. Researchers looking at this area in the future would need to note this as a perfectly good research proposal may become totally unfeasible because of restrictions on access.

The issues that emerged in the research literature in the previous chapter in this study raised questions about the imperfect relationship between LCE achievement and performance at third level. Studies already undertaken by Moran Crowley (1979), Brannick (1998), Conference of Irish Universities (1996) were quantitative studies. The investigation that follows will use quantitative and qualitative methods.

The qualitative approach will be adopted as the methods are particularly oriented towards exploration and discovery (Patton,1990) and are important for inquiries. A number of students were interviewed using theoretical sampling (Brannick,1998). Questions for the initial interview are scheduled before meeting the interviewees. The questions were motivated by the research literature. They were also discussed with other academics at a piloting phase. After six months a second interview was held. This enabled further clarification of issues raised at the earlier interviews. (Figure 2 shows the steps in processing interviews for this study).

FIGURE 2

Steps in the case study process for this study



SECTION VI

Summarises the validity and reliability of the study.

Validity and Reliability

It is important that acceptable research is objective and that the research design and framework is capable of being validated and the findings of the study must be reliable.

Yin (1984) suggests tests by which validity, and consequently reliability may be judged.

1. Construct Validity: establishing correct procedures for the research being conducted.

These procedures include:

(i) Using multiple sources of evidence,
(ii) Developing a chain of evidence and
(iii) Reviewing continuously aspects of the draft study report.

2. Internal Validity (for exploratory or casual studies only, and not for descriptive or exploratory studies): developing a casual relationship, whereby specific conditions are shown to lead to other conditions, as distinct from spurious relationships.

3 External Validity: development of the domain to which a study's findings can be generalised and,

4. Reliability - demonstrating that the conduct of a study - such as the data collection procedures - can be repeated with the same results.

According to Yin (1984) the importance of "validity" is that the researcher is researching the circumstances, exceptional event, relevant incident or concepts he/she actually sets out to study.

In the context of case study research Yin (1984) suggests: "to be sure that, if a later investigator followed exactly the same procedures as described by an earlier investigator and conducted the same case study all over again, the later investigator should arrive at the same findings and conclusions. (Note that the **emphasis** is on doing the same case over again, **not on** "replicating" the results of one case by doing another case study).The goal of responsibility is to minimise the errors and biases in a study" (Yin 1984, page 45).

Yin further suggests that at at all stages of the case study, in order to ensure validity and reliability the researcher adheres to:

1. The same framework of outline questions was used for all interviewees.

2. The interviewees were "not lead" into any particular replies or directions.

SECTION VII

Summary of Research Methodologies undertaken in this Study

Method	Purpose
Questionnaire issued to over 100 students, having completed their first year NCBS Course. Quantitative information on points and exact LCE grades of achievement were sought. **(September 1997)**	To provide data for preliminary consideration of the investigation. The results would allow data to guide the development of the research study.
Samples of quantitative information were examined, including LCE grades, subject results and end of year Examination reports. **(October to December 1997)**	To evaluate the quality of data and how various pieces of data could be matched to provide a complete set of data in respect of each individual student.
Interviews were piloted among a number of students, past graduates and academics in Business Studies and related disciplines. **(February/March 1998)**	To provide information to guide the development of an interview schedule.
Statistical information from Student records was extracted. This information had to be accurately matched in respect of input information on points and LCE grades and outcomes in years 1 to 4. **(January to September 1998)**	To provide accurate data in respect of quantitative questions. To improve the validity of the data and to increase the credibility of the findings.

Method	Purpose
Interview schedule developed to be administered to five students on high points and five students on lower points from a specific course intake. **(April to December 1998)**	To provide a picture of the world of the student. To obtain as wide a variety of information as possible.
Data collected from students attending UCC through Focus Group interviews. **(September to December 1998)**	To ensure results would complement each other in facilitating the richness of the findings of the research study.
Qualitative interviews with students not having studied a Business Studies subject in their LCE. **(January to December 1999)**	To provide a picture of students who had not Senior Level study of the three LCE subjects Accounting, Business Organisation and Economics.
Interviews with students of the Institute and other Institutes of Technology. **(September 1999 to March 2000)**	To obtain as wide a variety of responses as possible to help with the research findings.
Interviews with students from the eight Irish Universities in the Republic of Ireland and Northern Ireland. **(September 1999 to August 2000)**	To provide a picture of the world of the student in the non Technological sector of Higher Education in Ireland.

Method	Purpose
Interviews with students in the Private College Sector. **(April/May 2000)**	To provide information on the experiences of students in the Private College Sector in Ireland.
After carrying out a manual audit trail of the data, Statistical Package for the Social Sciences (SPSS) was used. **(July/September 1997)** **(July/September 1998)** **(July/September 1999)** **(July/September 2000)**	To provide accurate calculations and construct the necessary tabulations and figures for the study. The procedures for entering and exploring data were adhered to. The mean and standard deviations were calculated and tabulated. Statistical correlations or associations were calculated. The Pearson correlation which is a measure of a supposed linear relationship between two variables was calculated using SPSS. The package was also used to generate the charts and graphs set out in the findings.

SECTION VIII

Summary of the Chapter

In this chapter, the objectives and subjects of the study have been described. Various research methods are examined and details of the pilot study are provided. Later sections in the chapter were concerned with data collection, validity and processing. Finally, section seven dealt with the research methods applied in this study. The outcome of the research methods will be presented in the next chapter.

CHAPTER V

RESEARCH FINDINGS

Introduction

The present chapter attempts to compare second level academic achievement with the students third level academic achievement. (Achievement is detailed in **pages 21 and 82**). This will focus on entry points, mandatory subjects, Business Studies subjects and other characteristics. In addition the chapter will focus on the learners experiences by the use of case studies and interviews. In particular student's views on studying Business Studies subjects before entering third level Business Studies will be revealed.

This research attempted to address the aims and research questions detailed in **pages 8 and 9**. The research findings will be presented in this chapter in four sections. Section one will provide descriptive statistics of nearly two hundred students who registered for the NCBS with add on NDBS and Add on Degree of BBS 1996-2000. Each individual student was tracked through the four years of the course. Section two will present the findings from ten case studies. The case studies will deal with students having low points and are high achievers in third level and students with high points and low third level achievement and also students with expected academic achievement. Section three will examine the findings from one hundred interviews. The participant range includes interviewees from the non University sector, all Universities in Ireland, Private Colleges and students in CIT who had not attempted any Business Studies subject in their LCE. Section four will present a brief summary of the chapter.

SECTION 1

QUANTITATIVE ANALYSIS

The quantitative research findings in this study will be presented in five sections.

Section 1.1 This section will focus on entry points calculated by the Central Applications Office from the LCE and academic Performance in Business Studies.

Section 1.2 This section will concentrate on the mandatory subjects required for entry to the Business Studies course. The NCEA requires that a candidate has passed Mathematics and English or Irish in the LCE in order to gain entry to the Business Studies course.

Section 1.3 The three Business Studies subjects available in the LCE of Accounting, Business Organisation and Economics will be analysed in this section.

Section 1.4 Data on course choice, school attended and social classification will be presented here.

Section 1.5 A longitudinal study of comparison of academic performance of year one with year two, year two with year three and year three with year four will be given in this section.

SECTION 1.1

Entry Points and Academic Performance

(i) The Central Applications System has established a points scale for entry to first year courses. This points scale is applied to the results achieved in a candidates LCE subjects. The points level varies depending on the supply and demand for a course. The six best subjects in one sitting of the LCE will be used for the points level calculation. The following are the points scale (CAO 1996):

Table 1
Points Scheme

LCE	Higher Paper Points	Ordinary Paper Points
A1	100	60
A2	90	50
B1	85	45
B2	80	40
B3	75	35
C1	70	35
C2	65	25
C3	60	20
D1	55	15
D2	50	10
D3	45	5

Since the demand and supply of places on any specific course changes from year to year, it is virtually impossible in any particular year to predict in advance what points will be required for entry to any particular course. If there is a large number of applicants and a small number of places, the points required will be relatively high, if there is a large number of places and a small number of applicants the points required will be much lower. In the latter case Higher Education Institutions advertise the vacancies in September in order to fill the course.

(ii) Table 2 shows that with the exception of year two where achievement scores for the bottom and middle points ranges is almost the same, scores increased with the higher points range.

Table 2 demonstrates that 185 students attempted first year examinations and 19 had dropped out of the course before reaching first year examinations date. 67 (36%) were in the points range 330 to 345, 59 (32%) had 350 to 370 points and 59 (32%) had 375 to 460 points. Of the 19 students who dropped out early 8 (42%) were in the low points range, (37%) were in the middle points range and 4 (21%) were in the high points range. Therefore students who register and drop out very early before attempting the first year examinations are almost twice as high in the lower points range than in the higher points range in respect of this specific intake of students in Business Studies. The drop out rate of students who attempted first year, decreased with the higher points ranges. In the points range 330 to 345, 50 (75%) of students did not reach year four. In the points range 350 to 370 the corresponding figure was 39 (66%), while in the highest points range 375 to 460 the drop out amounted to 25 (42%).

Of the students who attempted first year, and progressed to second year 48 (72%) of the 330 to 345 points range attempted their examinations while in the 375 to 460 points range 51 (86%) attempted their second year examinations. 23 (34%) of first years in the range 330 to 345 sat their third year examinations while 39 (66%) in the range 375 to 460 points attempted their third year. In the final year 17 (25%) of students in the lowest points range who attempted their first year examinations completed their BBS degree while 34 (58%) of students in the higher points range of 375 to 460 had similar success.

It is clear from the above statistics that students in the higher points range performed academically better than their counterparts in the lower points range. Consequently the distribution of points and academic achievement demonstrates that students with higher

points have a better chance of completing their four years to achieve the BBS course. It is also noticeable that the overall mean average scores increased from 47.77% in first year lower points range to 55.34% in the highest points range.

TABLE 2

Distribution of Students' Achievement and Points Ranges

Year	Points Ranges 330 to 345			Points Ranges 350 to 370			Points Ranges 375 to 460			Total		
	N.	Mean	Stdev.	N.	Mean	Stdev.	N.	Mean	Stdev	N.	Mean	Stdev.
Year 1	67	47.77	8.71	59	52.33	8.04	59	55.34	10.89	185	51.64	9.74
Year 2	48	55.75	9.84	52	55.49	8.97	51	61.39	8.52	151	57.57	9.46
Year 3	23	58.40	5.65	31	59.80	6.92	39	65.68	7.25	93	61.92	7.45
Year 4	17	57.82	7.14	20	61.00	7.22	34	66.38	6.13	71	62.81	7.53
Did not sit First Year Exams	8			7			4			19		

(iii) Table 3 shows that about half of the students who succeeded in fourth year were in the range of 330 to 365 points, and four (12%) of them achieved 70+, while of the other half of the students in the range 370 to 455 points, nine of them 25% achieved this score.

The table demonstrates that students with higher points have a better chance of securing a first class honours degree than students with lower points.

TABLE 3

BBS Year 4

Points in LCE to overall performance in degree year 4 BBS

Overall Performance										
Points LCE	**40 to 44**	**45 to 49**	**50 to 54**	**55 to 59**	**60 to 64**	**65 to 69**	**70 to 74**	**75 to 79**	**80 to 84**	**Total Completing Four Years**
330	1			1	1					3
335				4						4
340		1					1			2
345			1	2	3	1				7
350		1		2	2	1				6
355				1	4	1	2			8
360				1	1		1			3
365					1	1				2
370		1	1		1	1				4
375				3	3	3	2			11
380					3					3
385						1				1
390										
395					1		2			3
400						2	2			4
405					1		1			2
410				1	1	3			1	6
435								1		1
455					1					1
	1	**3**	**2**	**15**	**23**	**14**	**11**	**1**	**1**	**71**

TABLE 4

(iv) **Pearson Correlations between entry points and overall academic achievement**

	330 to 345 points	350 to 370 points	375 to 460 points	Total
Year 1	.190	-.120	.074	.303
Year 2	.429	.055	.074	.282
Year 3 Dip Acc	.447	-.161	.321	.550
Year 3 Dip Mkg	.256	-.192	-.065	.267
Year 4 BBS	.309	-.125	.218	.440

Table 4 shows positive but not perfect correlation in the 330 to 345 points range in each year of the course. With the exception of year two which reveals a very weak correlation, negative correlations are recorded. In the higher points range 375 to 460 the correlations are weak and negative for year three Diploma in Marketing. Overall, total correlations were positive.

FIGURE 3(a)

Students' overall academic achievement in year 1 in relation to their points

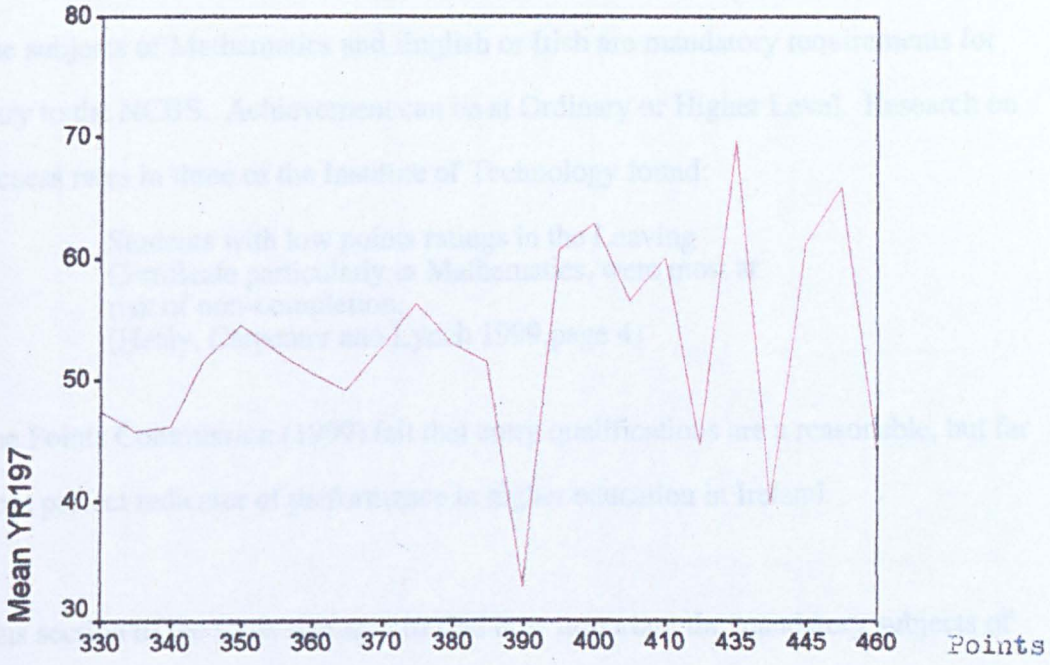
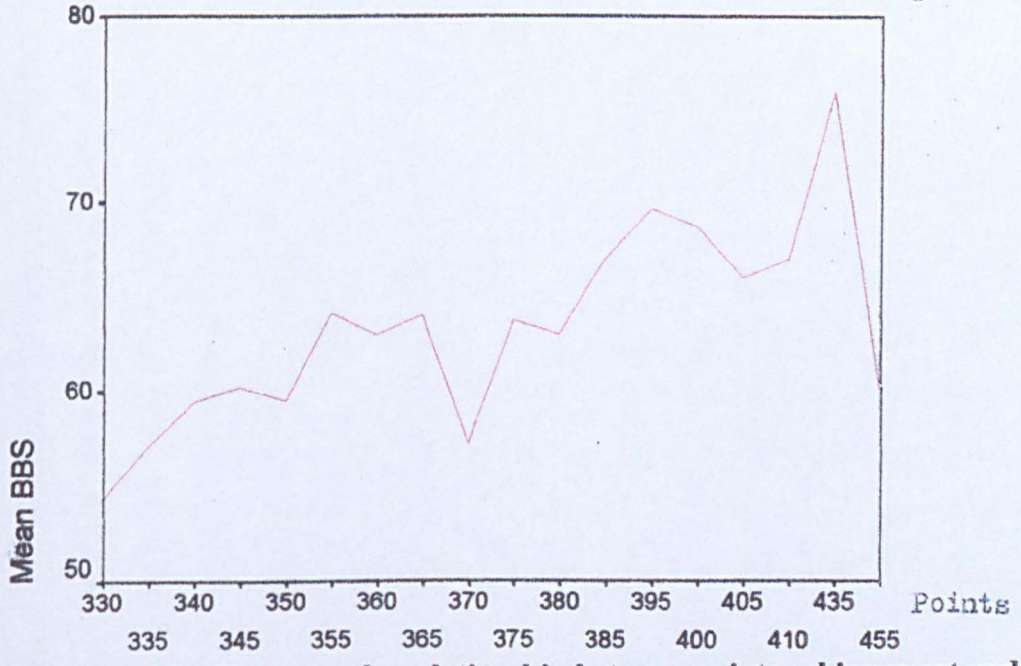


FIGURE 3(b)

Students' overall academic achievement in year 4 in relation to their points



Figures 3(a) and 3(b) illustrates the relationship between points achievement and overall academic achievement in the first year and the final year. The figures demonstrate that although a clear trend is not revealed, achievement appears to improve with increase in points.

Section 2 Mandatory Subjects

(i) The subjects of Mathematics and English or Irish are mandatory requirements for entry to the NCBS. Achievement can be at Ordinary or Higher Level. Research on success rates in three of the Institute of Technology found:

> Students with low points ratings in the Leaving Certificate particularly in Mathematics, were most at risk of non-completion.
> (Healy, Carpenter and Lynch 1999,page 4)

The Points Commission (1999) felt that entry qualifications are a reasonable, but far from perfect indicator of performance in higher education in Ireland.

This section of the study attempts to find how important the mandatory subjects of Mathematics and English are in relation to their subsequent academic performance in the Business Studies discipline specifically.

(ii) Table 5 shows that students with Higher Mathematics in LCE achieved Higher scores in each points range in first year Business Studies. In all other years though sometimes marginal Higher Level Mathematics students' perform better than their counterparts with Ordinary Level Mathematics with the exception of the 330 to 345 points range for years 2, 3 and 4 and the 350 to 370 points range for year 4. The drop out rate also differs between the three Points Ranges. Students with Higher Mathematics in the 330 to 345 points range had a retention rate of 1 (14.28%) while in the 370 to 460 points range the retention rate was 9 (75%). At Ordinary level the retention rate for the 330 to 345 points range was 16 (29.62%) while in the 370 to 460 points range the figure was 20 (48.78%).

TABLE 5

Distribution of Students with Higher and Ordinary Level Mathematics, their Points Ranges and overall academic performance in Years 1 to 4

Year	330 to 345 Points						350 to 370 Points						375 to 460 Points					
	Higher			Ordinary			Higher			Ordinary			Higher			Ordinary		
	N.	Mean	Std	N.	Mean	Std	N.	Mean	Std	N.	Mean	Std	N.	Mean	Std	N.	Mean	Std
Year 1	7	51	7.7	54	47	11.2	9	55	5.6	53	51	8.6	12	61	6.1	41	57	9.2
Year 2	5	51	14.3	37	54	9.4	9	56	9.6	44	56	9.0	12	66	6.8	38	62	8.8
Year 3A	2	53	10.9	17	60	4.8	5	59	8.2	28	60	6.6	9	66	5.7	29	66	7.4
Year 4	1	58	0.0	16	60	8.0	3	57	5.2	16	61	6.4	9	68	6.0	20	66	6.3

(iii) Table 6 shows that students with Ordinary Level English achieve better mean scores than their counterparts with Higher Level English in first year Business Studies. This difference increases as the points range increases. In years two, three and four the differences are mixed and sometimes marginal. However, the high points range of 375 to 460 points in year four shows a difference of seven points in favour of students with Ordinary Level English.(students were included only where the exact grade obtained in LCE English could be ascertained from the data)

The drop out rate for students of Higher Level English in the lower points range of 330 to 345 was 31 (77.5%) while in the high points range of 375 to 460 the comparable figure was 21 (47.72%). In Ordinary Level English the drop out rate for the lower points range of 330 to 345 was 10 (58.82%) while the figure for the Higher points range of 375 to 460 was 1 (20%).

TABLE 6

Distribution of Students with Higher and Ordinary Level English in their LCE, Points Ranges and academic achievement in Third Level Business Studies

Year	330 to 345 Points						350 to 370 Points						375 to 460 Points					
	Higher			Ordinary			Higher			Ordinary			Higher			Ordinary		
	N.	Mean	Std	N.	Mean	Std	N.	Mean	Std	N.	Mean	Std	N.	Mean	Std	N.	Mean	Std
Year 1	40	48	7.7	17	50	8.5	36	51	8.4	8	57	6.1	44	54	10.5	5	64	10.4
Year 2	30	58	10.5	14	55	10.5	31	54	8.3	8	60	8.7	38	61	8.8	5	59	10.8
Year 3	15	54	14.8	7	62	5.7	17	58	6.4	5	64	6.0	28	78	5.2	4	73	5.2
Year 4	9	60	7.1	7	57	8.8	9	56	6.0	4	64	4.1	23	63	14.4	4	70	9.7

(iv) Table 7 shows that twenty students (10%) did not attempt first year Business Studies Examinations. Over half of them had three hundred and fifty points or less. While half of the students' entering the course had attempted Higher Level Mathematics in their LCE, only one of the twenty students who did not finish first year had Higher Level Mathematics and that was a Higher Level D.

With regard to English, 16 (80%) had Higher Level English, in the case of 3 (15%) the exact grade could not be obtained and 1 (5%) had Ordinary Level English.

TABLE 7

Distribution of Students who registered for first year Business Studies and did not attempt the first year examinations

Points Achieved in LCE	Mandatory Subjects	
	Maths	English
330	OB2	HC3
335	OC1 HD1	N/A HC2
340	OB1 OB1 OB2 OB3	HC3 HC3 HC3 HC1
345	OB2	HD2
350	OC2 OA2 OA2	OC1 HD1 HC2
355	OB2 OB1	N/A HB3
360	0B1	HC1
370	OB2	HC3
380	OC1	HB3
390	OB3 OA2 OB3	HC2 HC2 N/A
395	OB1	HC1

(v) Table 8 shows positive correlations between the quantitative subjects Mathematics and Accounting, Mathematics and Statistics in first year Business Studies. The correlations for male candidates were marginally higher than for female students in both subjects.

TABLE 8

Correlation between the mandatory subject Mathematics in the LCE and the two quantitative subjects in Year 1, Accounting and Mathematics and Statistics

Subject	Male		Female		Total	
	N	Correlation	N	Correlation	N	Correlation
Maths to Accounting Pearson Correlation	81	r=.427	95	r=.420	176	r=.421
Mathematics to Business Mathematics and Statistics Correlation Pearson	81	r=.573	95	r=.504	176	r=530

Section 3 Business Studies subjects in LCE

(i) The three main stream business subjects in the LCE are Accounting, Business Organisation and Economics. Accounting, Economics and Business Mathematics are compulsory in most third level first year business courses. Students who have decided at entry to senior cycle that they intend making Business Studies their career , may select one or more of the Business Studies subjects listed above. However, due to particular constraints, they may not be able to select a particular Business Studies subject. These constraints include time table clashes with other subjects, limit of class sizes in the school or lack of provision of a specific subject in the school curriculum. Students who have not decided on a Business Studies career at the beginning of their LCE studies may decide later when they have completed their senior cycle.

Of the two hundred plus students in this study only eighteen of them had not attempted a Business Studies subject in their LCE before entry to the course.

This section of the study attempts to find how important Business Studies subjects in the LCE are when studying Business Studies at third level.

(ii) Table 9 shows that students who attempted accounting in their LCE achieved Higher overall performance in first year than their counterparts who had not attempted the subject. This trend is less clear after first year. The retention rate of students' completing the four years of the course increases with the increase in Points Ranges. 22% of students in the 330 to 345 points range with accounting completed the four years while 60% of students with accounting in the 375 to 460 points range completed the degree. 26% of students in the 330 to 345 points range without having studied accounting in their LCE completed the four years while 56% the counterparts with 375 to 460 points who had not studied the subject in their LCE achieved their Bachelors Degree.

TABLE 9

Distribution of students' Points Ranges, with and without Accounting in their LCE and their Third Level academic performance

Year	330 to 345 Points						350 to 370 Points						375 to 460 Points						Total 330 to 460 Points		
	With Accounting			Without Accounting			With Accounting			Without Accounting			With Accounting			Without Accounting			With and Without Accounting		
	N.	Mean	Std	N.	Mean	Std	N.	Mean	Std	N.	Mean	Std	N.	Mean	Std	N.	Mean	Std	N.	Mean	Std
Year 1	32	51	7.95	35	45	8.16	25	55	7.39	33	50	7.96	25	59	8.63	34	54	12.82	184	51.82	9.92
Year 2	24	57	10.08	24	55	9.76	24	55	9.40	27	55	8.63	21	61	7.84	29	61	9.21	149	57.45	9.46
Year 3A	6	56	6.49	0	0	0.0	8	59	7.77	3	54	5.35	11	66	9.62	2	72	10.61	30	61.33	9.34
Year 3M	7	56	3.48	11	62	4.93	5	61	6.48	14	60	7.23	6	66	8.30	20	65	5.83	63	62.15	6.61
Year 4	8	57	6.25	9	59	8.21	9	61	7.33	13	61	6.43	15	68	5.61	19	65	6.51	73	62.6986	7.2355

(iii) Table 10 shows that Students who had attempted Business Organisation in their LCE performed marginally less in their overall performance in first year than their counterparts who had not attempted the subject across the three Points Ranges. Students with the subject do not appear to have any apparent advantage over Students who had not studied the subject in years two, three and four. Students with the subject in the 330 to 345 points range had a 22% retention while Students in the 375 to 460 points range had a retention rate of 58%. Students without the subject in their LCE had a retention rate of 29% in the 330 to 345 points range while Students in the higher points range of 375 to 460 had a retention rate of 57%

TABLE 10

Distribution of Students' Points Ranges, with and without Business Organisation in their LCE and their Third Level academic performance

Year	330 to 345 Points						350 to 370 Points						375 to 460 Points					
	With Bus. Org.			Without Bus. Org.			With Bus. Org.			Without Bus. Org.			With Bus. Org.			Without Bus. Org.		
	N.	Mean	Std	N.	Mean	Std	N.	Mean	Std	N.	Mean	Std	N.	Mean	Std	N.	Mean	Std
Year 1	36	46	7.97	31	50	8.65	38	52	8.46	20	53	7.60	38	55	11.78	21	57	10.87
Year 2	26	54	8.93	22	58	10.71	34	57	7.60	17	52	10.66	31	61	8.86	19	62	8.29
Year 3A	0	0	0.0	6	56	6.49	8	60	6.72	3	53	7.02	8	69	6.81	5	63	12.84
Year 3M	10	62	4.89	8	57	5.00	14	61	6.75	5	59	7.86	17	63	5.90	9	69	5.76
Year 4	8	59	8.65	9	58	6.18	15	61	7.54	7	62	4.64	22	65	6.32	12	67	6.10

(iv) Table 11 shows no apparent trend between students with economics in their Leaving Certificate and students without. However, in year four students without the subject performed academically better in all points ranges than their counterparts with it, although marginally with the exception of the 375 to 460 points range. 23% of students in the 330 to 345 points range with the subject completed the four years of the course while it increased to 36% for students in the 375 to 460 points range. Students without the subject in their Leaving Certificate in the points range 330 to 345 had a 26% retention rate while the comparable figure for students without the subject in the 375 to 460 points range was 63%.

TABLE 11

Distribution of students, their points ranges, with and without Economics in their Leaving Certificate and their third level academic performance

Year	330 to 345 Points						350 to 370 Points						375 to 460 Points					
	With Economics			Without Economics			With Economics			Without Economics			With Economics			Without Economics		
	N.	Mean	Std	N.	Mean	Std	N.	Mean	Std	N.	Mean	Std	N.	Mean	Std	N.	Mean	Std
Year 1	13	47	9.56	54	48	8.33	9	53	7.99	49	52	8.20	11	52	8.96	48	56	11.88
Year 2	7	60	5.06	41	55	10.33	7	56	7.35	44	55	9.20	9	56	10.44	41	62	7.83
Year 3A	1	59	0.00	5	55	7.00	1	60	0.00	10	58	7.69	0	00	0.00	13	67	9.57
Year 3M	5	57	6.57	13	61	4.59	4	60	8.27	15	61	6.78	5	64	5.99	21	65	6.55
Year 4	3	59	10.96	14	61	6.74	3	60	3.51	19	62	7.05	4	61	4.78	30	67	6.14

(v) Table 12 shows that students who attempted Accounting in their LCE achieve better scores in Accounting in first year that their counterparts who have not attempted the subject. As the points increase, the difference in academic achievement between the two groups decreases.

TABLE 12

Academic performance of the subject Accounting in year one in relation to points ranges and students who attempted and did not attempt Accounting in their LCE

	Attempted LCE Accounting			Did not attempt LCE Accounting		
	N.	Mean	Std.	N.	Mean	Std.
330 to 345	32	62	12.25	33	40	10.65
350 to 370	25	65	12.01	34	47	13.50
375 to 460	25	66	14.15	33	51	15.53

(vi) Table 13 shows that in year one and year four the best combination of business subjects was Accounting and Business Organisation in the LCE. In second year Economics students' achieved the best scores while in third year Diploma in Accounting the Business Organisation students' achieved best. In the Diploma in Marketing third year students of Economics and Business Organisation in the LCE scored highest mean scores. The highest drop out rate was among students with Business Organisation and Economics 7 (77.77%) followed by students with Accounting and Economics 8 (66.66%), next was Business Organisation and Accounting 22 (62.85%). The lowest drop out rates were shared between students with Accounting 19 (57.57%) and Business Organisation 41 (57.74%)

TABLE 13

Distribution of students with and without Business Studies subjects in LCE in relation to their overall achievement in Years 1 to 4 Business Studies

Year	None			Accounting			Bus. Org.			Economics			Accounting and Bus. Org.			Accounting and Economics			Bus. Org. and Economics		
	N.	Mean	Std	N.	Mean	Std	N.	Mean	Std	N.	Mean	Std	N.	Mean	Std	N.	Mean	Std	N.	Mean	Std
Year 1	14	53	12	33	54	8	71	49	10	10	51	11	35	55	8	12	53	7	9	47	10
Year 2	12	57	11	30	56	11	56	57	9	6	62	8	30	58	8	9	58	7	6	50	6
Year 3A	0	0	0	13	57	10	5	61	11	0	0	0	11	66	6	1	59	0	0	0	0
Year 3M	6	68	8	5	61	4	31	62	6	6	62	8	8	59	6	4	59	8	3	61	4
Year 4	6	66	6	14	62	7	30	62	7	4	61	3	13	64	7	4	60	9	2	57	3
Drop Out	8			19			41			6			22			8			7		
	57.14%			57.57 %			57.74 %			60 %			62.85%			66.66%			77.77%		

FIGURE 4

(vii) **Distribution of students who did not attempt Accounting in their LCE and their academic performance in first year Accounting in the NCBS**

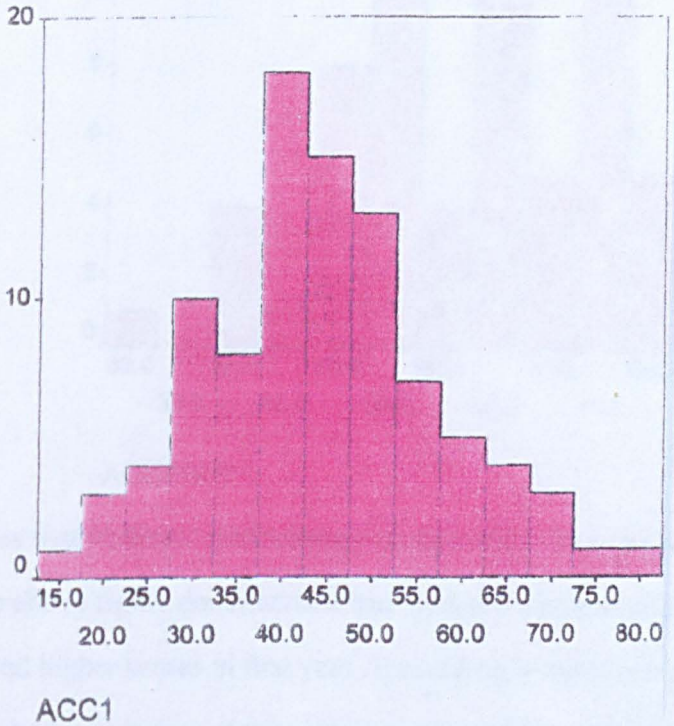


Figure 4 shows that students' performance peaked at the 40, 45 and 50 scores in first year Accounting. The proportion of students achieving a score of 55+ is quite small. Students progressing to second year will need a minimum score of 55 to be considered for progression to third year.

FIGURE 5

(viii) **Distribution of students who attempted Accounting in their LCE and their academic performance in first year Accounting in the NCBS**

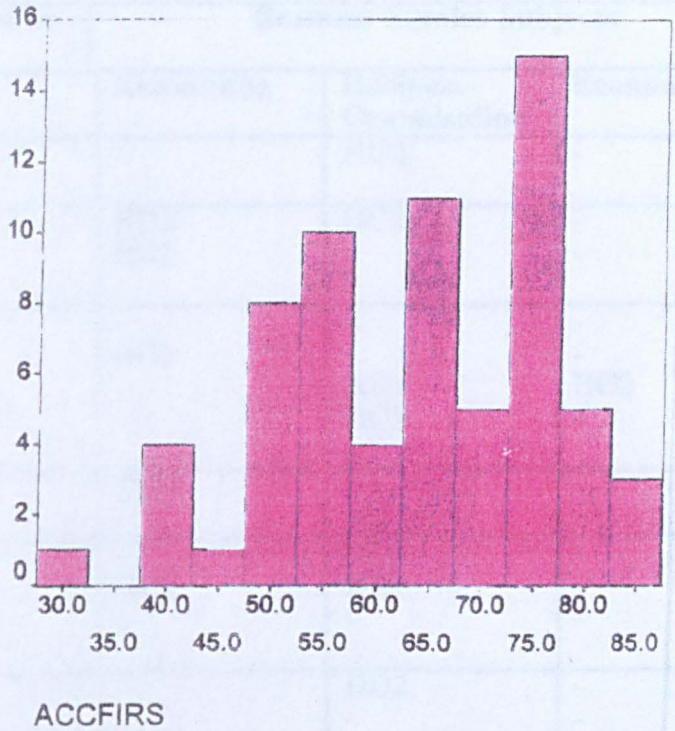


Figure 5 illustrates that students' performance peaked at the 75 score in first year Accounting. The above figure demonstrates that students who had studied Accounting in their LCE achieved higher scores in first year Accounting in most cases than their counterparts who had not attempted the subject in their LCE as shown earlier in figure 4.

TABLE 14

(ix) **Distribution of Students who registered for first year NCBS and did not attempt the first year examinations**

Points Achieved in LCE	Business Studies Subjects		
	Accounting	Business Organisation	Economics
330	-	HD2	-
335	HD2 HB2	HC2 -	- -
340	- HC1 - -	- - HD1 HC3	- - HC2 -
345	HB3	-	-
350	- HC2 -	HD1 HD1 -	- - -
355	- -	HD2 -	- -
360	-	HB2	-
370	-	HB3	-
380	HC3	HB3	-
390	- - HC1	- HB3 HB3	- - -
395	-	HD3	-

Table 14 shows that 13 (65%) of students had attempted Business Organisation in their LCE followed by 7 (35%) in the subject Accounting. Only 1 (5%) attempted Economics. Four students (20%) had not attempted any Business Studies subject in their LCE which came from the three different points ranges.

(x) Table 15 highlights the correlations between Business Studies subjects in the LCE and academic performance in years 1 to 4 of the Business Studies course. The highest positive correlations were recorded for male students in the fourth year (BBS) r = .565. A positive correlation of r= -.460 was revealed for the subject Economics for male students in the fourth year (BBS). A perfect correlation was not recorded for any of the LCE Business Studies subjects and academic performance.

TABLE 15

Correlations between Business Studies subjects in LCE and year of study in Third Level Business Studies

	NCBS		NCBS		NDBS(ACC)		NDBS(MKT)		BBS	
	Year 1		Year 2		Year 3		Year 3		Year 4	
	M	F	M	F	M	F	M	F	M	F
Accounting	r=.281	r=.230	r=.092	r=.285	r=.164	r=.197	r=.134	r=.095	r=.565	r=.461
Bus. Org.	r=.102	r=.435	r=.232	r=.139	r=.431	r=.114	r=.020	r=.028	r=.387	r=.222
Economics	r=.279	r=.048	r=.229	r=.138	N/A	N/A	r=.176	r=.139	r=.460	r=.267

Section 4 Course Choice, School and Social Background

(i) Course Choice

Students can give their preference in selecting their course when making their application to the CAO. An applicant is allowed to make ten choices. Their highest priority will be choice one and their lowest will be choice ten. The CAO will offer the preference of the student depending on the points achieved in the LCE . A student with low points may not be offered their higher preference. For example, a student living in Cork will probably indicate Cork Institute of Technology as preference number one for Business Studies. However, the points requirement for Cork Institute of Technology may be 355 points, while in Athlone or Tralee Institutes it may be 200 points. If the student has achieved 220 points, he or she will be offered Athlone or Tralee.

TABLE 16

Distribution of Students' Choice of Course and their Academic Progression

Choice of Course	Year 1	Year 2	Year 3	Year 4	Total %
1	146	119	76	59	40%
2	30	24	14	11	37%
3	5	3	2	2	40%
4	2	2			0%
Choice not clearly indicated by student	21	1	1	1	4.7%
Total	204	149	93	73	35.7%

Table 16 details the choices students made on their Central Applications form and academic progression in years 1 to 4. Of the 183 students for which information on choice could be ascertained 86 (47%) were male and 97 (53%) were female students. Most of the students 146 (80%) had selected the course as their first choice. Only 30 (16%) students could be classified as choice number two. 41% of both categories in the case of female students progressed to the BBS and 40% male while 31% of male students who had indicated the course as choice number two progressed.

TABLE 17

(ii) **Correlation between first and second year Achievement and Course choice in the NCBS**

	Male		Female		Total	
	N	**Correlation**	**N**	**Correlation**	**N**	**Correlation**
Year 1 Pearson Correlation	86	r=-.107	97	r=-.206	183	r=-.153
Year Pearson Correlation	69	r=-.056	79	r=-.284	148	r=-.179

Table 17 shows negative correlations between the choice indicated on application for the NCBS course and academic performance in year one and year two. The Negative correlation is higher for female students than male students.

FIGURE 6

(iii) Students' Choice of Course and Overall Academic Performance in Year 1

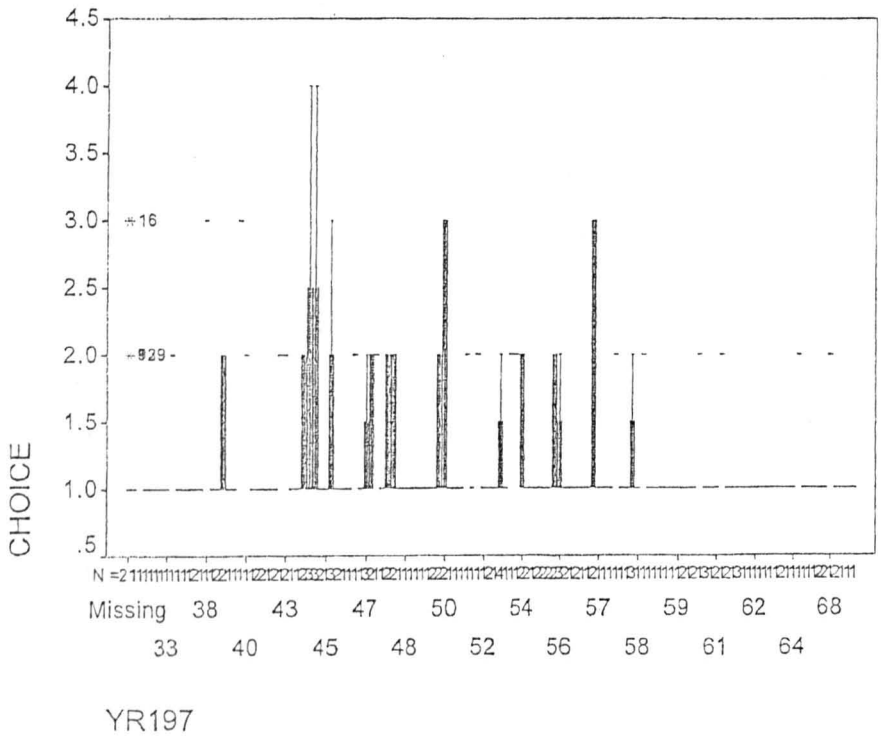


Figure 6 shows the relationship between choice of course and overall academic performance in first year NCBS. The great majority of students selected the course as their first choice on their formal application for a place to the CAO. The Pearson correlation between choice and academic performance in year 1 is negative r=-.153.

(iv) **School Type**

There are nine categories of school types. The new student is asked to indicate which school he or she received second level education in. The following table sets out the school types.

TABLE 18

School Type

Code	Previous School Type
1	Other RTC & Technological College
2	Vocational School
3	Secondary School
4	Comprehensive
5	Community
6	Education Institute outside the State
7	Transfer within this Institution
8	Other within the State
9	Not in any full-time full-session course during previous year

TABLE 19

(v) Distribution of Students' School Attended and their Academic Progression

School Attended	Year 1	Year 2	Year 3	Year 4	Total %
1	3	1	1	1	33%
2	8	7	5	3	37%
3	80	63	33	28	35%
4	3	2	1	1	33%
5	17	14	10	9	53%
6					
7	3	3	1	1	33%
8	3	2	1	1	50%
Student did not clearly indicate previous school attended	87	57	41	29	33%
Total	204	149	93	73	36%

Table19 shows type of school attended by students and their progression from year one through to year 4 BBS. Type of school attended was ascertained for 117 students in the study. Most of the students in the study for which satisfactory information on their previous secondary schooling could be obtained attended secondary schools and the next highest category of school were Community Schools. 53% of students coming from Community schools progressed to year 4 BBS while 35% of students from Secondary type schools progressed to this level.

Section 5 continued

(vi) **Social Background**

The twelve categories of the socio-economic groups are defined by the Central Statistics Office (1996). The following is a list of the Occupations.

1. Farmers, farmers' relatives and farm managers.
2. Other agricultural occupations and fishermen.
3. Higher Professional.
4. Lower Professional.
5. Employers and Managers.
6. Salaried Employees.
7. Intermediate non-manual workers.
8. Other non-manual workers.
9. Skilled manual workers.
10. Semi-skilled non-manual workers.
11. Unskilled manual workers.
12. Unknown.

Students are required to indicate the category they belonged to on their enrolment application material. 51(25%)of students who registered for first year did not correctly complete this. However, the study examined forms from 153 (75%)that were satisfactorily completed.

This section attempts to ascertain if there are relationships between social background and success in Business Studies.

(vii) Table 20 details the social status and progression of students from years one to year 4 (BBS). Information on social status was ascertained for 153 students and 60 of these (39%) progressed to the final BBS year. Positive but very weak correlations were revealed for male students in years one and two. Negative correlations were revealed for female students for all years.

TABLE 20

Social Status and Progression

Social Status	NCBS 1		NCBS 2		Diploma 3 (Accounting)		Diploma 3 (Marketing)		BBS 4		%
	M	F	M	F	M	F	M	F			
1	11	16	8	12	1	4	3	3	4	5	33%
2	-	1	-	1		-	-		-	-	0%
3	5	4	3	4		1	4	1	2	2	44%
4	8	3	7	3	1	1	2	2	2	3	45%
5	6	8	5	7	1	1	2	5	1	1	14%
6	5	4	4	2			2	1	2	1	33%
7	5	5	3	3	1		1	1	2	1	30%
8	6	10	6	10	1	3	3	4	3	7	62%
9	11	12	8	7	2	1	2	3	4	4	35%
10	5	5	5	4	1	1	1	2	2	3	50%
11	3	1	3	1	1		1	1	2	1	75%
12	5	14	5	12	1	2	3	4	3	5	42%
	70	83	57	66	10	14	24	27	27	33	39%
Info. not given by student	51		26		18		22		13		6%
	204		149		93		73		73		
Pearson Correlation r=	.041	-.156	.125	-.075	-.217	-.026	-.174	-.109	-.044	-.218	

FIGURE 7

(viii) **Socio-Economic Classification of Students and their overall Academic Performance in Year 1**

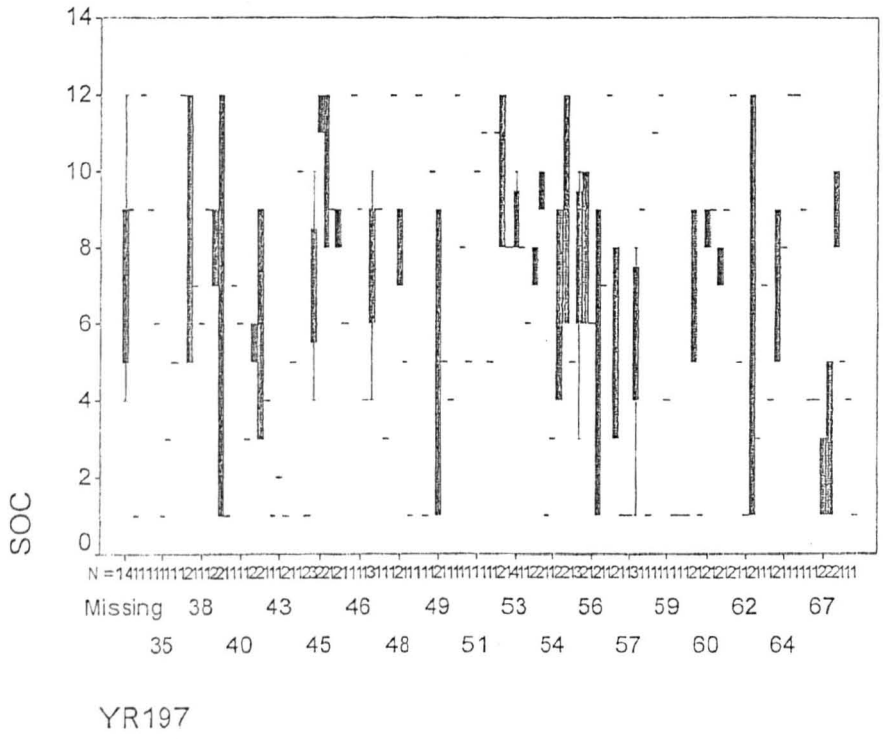


Figure 7 shows no apparent trend in the relationship between The Socio-Economic status of students and their academic performance overall in year 1 of the NCBS. The correlation is negative Pearson r = -.061.

Section 5 Longitudinal Study of Academic Performance

The BBS course consists of four years of full time study. It is built on the "ladder principle" of two years for the National Certificate, plus one year for the National Diploma and one year for the Bachelors Degree award. In first year a student need only achieve the minimum pass mark of 40% to proceed. However, in second and third year a minimum of 55% is required to be considered for a place.

Moran and Crowley (1979) suggested that a student who passes his or her first year University Examination has been fully accepted by the third level educational institution in accordance with its criteria for assessment and any later failure to complete is because of faults in the assessment rather than any pre-third level institutional assessments.

This section attempts to discover if there is a correlation between first year and subsequent years, second year and subsequent years and third year and fourth year (BBS).

TABLE 21

Correlations between academic performance in NCBS Year 1 and NCBS Year 2, NDBS Year 3 and BBS Year 4

	NCBS Year 2	NDBS Accounting Year 3	NDBS Marketing Year 3	BBS Year 4
Male students	r = .504	r = .735	r = .379	r = .279
Female students	r = .532	r = .335	r = .434	r = .424
Total	r - .520	= .486	r = .436	r = .361

Table .21. shows correlations ranging from r = .279 to r = .735.The strongest correlation was found between Year 1 NCBS performance and Year 3 NDBS in Accounting for male students r = .735. There is a stronger correlation between Year 1 and Year 2 performance for female students than male students while the correlation between Year 2 and the Diploma in Marketing Year 3 was higher for female students than male students. The reverse is true for the Diploma in Accounting Year 3. In respect of the BBS Year 4 the correlation is weaker for male students than female students in comparing Year 3 with Year 4 academic performance.

TABLE 22

Correlations between academic performance NCBS Year 2 and NDBS Year 3 and BBS Year 4

	NCBS Year 2		
	NDBS Accounting Year 3	**NDBS Marketing Year 3**	**BBS Year 4**
Male Students	r = .599 p = .233	r = .275 p = .632	r = .138 p = .356
Female Students	r = .175 p = .288	r = .489 p = .424	r = .204 p = .507
Total all genders	r = .269 p = .225	r = .398 p = .766	r = .169 p = .193

Table 22 shows positive correlations ranging from r = .138 to r = .766. The strongest correlation was recorded for male students in the Diploma in Accounting 1999 and the weakest for male students in BBS Year 4.

Correlations between the NDBS Accounting third year and NDBS Marketing third year and BBS fourth year

NDBS Accounting r = .719

NDBS Marketing r = .750

Although these correlations are not absolutely perfect, they are strong positive correlations.

The next section will focus on the qualitative findings to this study. It will reveal the findings from case studies/interviews with the many students who were interviewed for this investigation. In particular it will focus on students with high points and their academic performance and students with low points and their academic performance. It will also look at students who did not attempt any of the Business Studies subjects of Accounting, Business Organisation or Economics in their LCE before entry to the NCBS course.

SECTION 2

CASE STUDY ANALYSIS

Introduction

The main case study findings are presented thematically in this section. The ten students who participated were all students of the NCBS course which commenced their first years' studies in the nineties. Direct quotations from the students interviews are presented. Gender balance has been adhered to by interviewing five male students and five female students. The identity of each student case study is respected by allocating an alphabetical letter to distinguish each case.

The case findings are categorised as follows:

> Low entry points = 330 and high academic achievement in Business Studies 55%+ 1st year, 2nd year and 3rd year.
>
> High entry points = 390 to 460 and low academic achievement in Business Studies less than 50% in first and second year and not qualifying to proceed to third or fourth year.
>
> Low entry points = 330 and academic achievement in Business Studies bare pass in second year and not qualifying to proceed to third or fourth year.
>
> High entry points 435 and academic achievement in Business Studies and average of over 70% for four years.

The study attempted to find the students' personal feelings about their studies. McCracken (1982) suggests that the long interview is one of the most important methods in the qualitative research methodology. Lenihan (1998) explains that the method can take us into "the mental world of the individual and glimpse the categories and logic by which he or she sees the world". The findings contribute to filling an empirical gap in the literature on Business Studies students in an Institute of Technology in Ireland.

Prior research has been mainly statistical and consequently has not approached students about their personal feelings and intentions. Statistical research does not reveal students' thoughts.

Indeed Moran and Crowley's (1989) extensive statistical research sets out a number of areas that their research was not intended to provide findings on and saw them as limitations to their research. They explained that there were many factors that militated against LCE achievement predicting academic performance in third level education.

Details of each case is given in Table 23 that follows.

Table 23

Distribution of Case Studies

Points	Gender	Business Studies Subjects/ LCE	Year 1	Year 2	Year 3	Year 4	Overall Average Result
330	F	Bus. Org.	Merit 2	Merit 2	Merit 2	Pass	54.55
330	M	Econ.	Merit 2	Merit 1	Merit 2	Merit 1	61.22
330	M	Bus. Org.	Pass with C.	Pass	Left the Course	Left the Course	38.35
330	M	Acc.	Merit 2	Merit 2	Merit 1	Merit 1	61.6
330	F	None	Merit 2	Merit 2	Left the Course	Left the Course	
460	F	Bus. Org.	Pass	Abs.	Left the Course	Left the Course	44.4
440	M	Bus. Org.	Pass	Abs.	Left the Course	Left the Course	39.8
435	F	Acc.	Merit 1	Dist.	Merit 1	Dist.	71.7
415	F	Bus. Org. and Econ.	Pass	Pass	Left the Course	Left the Course	45.5
390	M	Bus. Org.	Fail	Abs.	Left the Course	Left the Course	14

Having examined the statistical analysis in the previous section for particular characteristics such as students with low entry points and high third academic performance and high entry points and low academic performance, it was felt that this case study research would investigate particular issues in further detail.

Analysing the Case Studies

Because of the limitation of words in this thesis it was necessary to construct an approach for the analysis and presentation of the case studies. Although a number of themes emerged after careful analysis of the responses obtained from extensive participation by students selected it was decided to:

(i) Provide selected quotations concerning the relationship of LCE performance to Third Level Academic Achievement.

(ii) Provide in tabular form a distribution of Interviewee/Case Study responses.

(iii) Present a brief summary.

(i) **Relating LCE Achievement to Third Level Academic Achievement**

In relating LCE performance to third level academic performance, it is important to refer to the points system which is the mechanism used for entry to third level education institutions in Ireland. The process involves attaching numerical scores or values to LCE results. The five best scores for each subject are added to provide a points total and create rankings to fill quotas for the various courses in Institutes of Technology and Universities.

The Conference of Heads of Irish Universities (1996) undertook a study of the predictive value of the LCE for University performance. A wide variety of disciplines were represented in this study. The study claimed that its overall results from each University were broadly consistent. It suggested that there was a weak relationship between the points scores from the LCE and final Degree performance in the Universities. It explained further that students who enter the courses with high points generally done well. However, it was pointed out that students with

modest points were able to achieve degrees of high honours. The study emphasised that:

> "It is clear that the Universities could let some students with "lower points" and see them perform well - that is more students could benefit from the University experience". (p.7 Conference of Heads of Irish Universities 1986).

Nevin (1974) claimed that academic performance in the Faculty of Science in University College Dublin improved with better LCE performance. Moran and Crowley (1979) suggested that the pass rate in the first university examinations increased monitonically with performance in the LCE with very clear cut differences between students with low and high points scores calculated on the basis of their LCE results. A study for the Points Commission of the Department of Education (1998) on the LCE as a predictor of academic performance in Higher Education , claimed that ,while there was a strong relationship between LCE Grade point average and higher education performance, it was not a perfect relationship. The study explained that this is true of first year and final year in higher education in Ireland. The fact that the findings were reasonable but not totally reliable predictor of final year performance concurs generally with the findings of the study of the Conference of Heads of Irish Universities above.

Moran and Crowley (1979) stated that there were many reasons for the limited predictive value of the LCE. They referred to the many non academic factors which militated against good prediction. Factors they specifically referred to were emotional, financial and family stress, social sporting and extracurricular activities. Another area pointed out was lack of motivation and boredom by the academic routine.

This section of the study attempts to address the reason why students with minimum entry points from their LCE perform well and students with high entry points

perform poorly in third level Business Studies. The following questions were put to interviewees:

> Could you explain why your LCE performance is better/consistent with/worse than your academic performance in the NCBS course?
>
> What Motivates you?
> Is it a good job, to please your parents, financial reward eventually, to be better than your peers, independent of your peers or pride.

Students with minimum entry points and high academic performance and students with high entry points and low academic performance were interviewed at length and the following quotations from their interviews reflect their responses. Students with the minimum entry points:

> I think the reason for my performance in third level being better than in my LCE is that I liked all my subjects in the Business Studies course whereas I did not like my Leaving Certificate subjects which were mandatory and I did not have a choice. In other words, I was doing what I liked on the Business Studies course. I found much of the Business Studies course an easy course. Accounting and Law brought down my marks in second year. Some lecturers were brilliant and helped me a lot. Some of my first year lecturers were better that my second year. Second year had much more theory than first year and sometimes there is no learning in this.
>
> I was motivated to get a good job. I was also motivated to please my parents, get financial reward, independence and pride.
> **[Student I]**

> I believed I performed better in third level than in second level because I did not like secondary school and as a result worked harder in third level. I was studying for myself in third level and that is what I always wanted to do. In second level I thought class distinction was being practised and teachers were not treating students equally. My first year after the LCE motivated me to work harder for results.
> In second level if you were kicked out of class in year one it was remembered by all the teachers right up to the last year when you were leaving the school. This was de-motivating.
> I was motivated by the principles that I would like to be best at what I do. I did not know the entry points of the others in my class and this was good for everyone in the class.
> **[Student D]**

I would explain my performance in third level as compared to my LCE, where I only obtained the minimum points for entry to NCBS as follows:
I liked maths subjects in year one, for example, Economics, statistics and Accounting were quantitative subjects. I liked the relaxed atmosphere for students. I got on well with my lecturers in the CIT and I did not get on well with my LCE teachers. Tutorials also helped in CIT. I couldn't pick my subjects in the LCE with the exception of Accounting which I obtained a HB3 in. However, I was able to pick my Business Studies course in CIT. I did a bit worse in year two because the subjects were more theoretical. I did well again in year two in numerical subjects such as Accounting and costing. MPP, Law, German and MIS were more difficult for me in year two and as a result I scored poorer marks in these subjects. The fact that I got the minimum points and did not do so well in LCE, I knew I had to work in the CIT to pass my examinations. Although I had the minimum points I did not know the points of my fellow students and this helped. I am motivated by the prospect of a good job and independence from my parents.
[Student E]

I account for my academic performance being to get a place in LCE and well above the pass mark in Year one and Year two in CIT to be the fact that I worked hard in my Business Studies course. I attended most of my classes, I did my work which I had to do. I am doing something in Business Studies that I always wanted to do. There was less pressure in third level than for the LCE studies in my view. If I went down in a subject I always knew that I could resit that subject in the repeats in the Autumn examinations and this removed a lot of pressure whereby in the LCE a whole year was ruined before you could resit a failed subject again. Again in year two I attended most of my classes and I loved the subject of Marketing. I am motivated by a number of things such as to get a good job, to please my parents, financial reward eventually and pride. While studying in CIT I believe that I did not read enough and coming up to examinations I would do previous examination questions as preparation.

My success I believe was due to being on the course by my own choice, doing something I enjoyed and was interested in and as already stated less pressure than in LCE. If I had not done Intermediate Certificate commerce I would have been lost in Accounting in first year. Two friends of mine who had not studied Accounting in their LCE did not return to year two of the course. I did not know the points of entry of my fellow students. A number of people who had Accounting in LCE also done worse than us.

The fact that I got in to the CIT not scraping the bottom of the barrel as it were made me work harder than if I got more points from my LCE achievement I would be more laid back.
[Student H]

Low Entry Points and Low Academic Achievement:

> In relating my achievement in LCE to my third level performance, I would say I just wanted to get by and I did, in fact I always put in just enough to get by, no more or less. I believe that students who attend classes ask questions and enter dialogue with lecturers do better. I am now attending WIT and doing the Diploma in Law. I find a difference between WIT and CIT in that the lecturers in WIT appear to be younger and they get involved socially more with students. To summarise I just do enough to get by both in my LCE and in the two years in the CIT doing Business Studies. My main motivation is to get a job.
> **[Student C]**

Quotations from interviewees with high entry points and low academic achievement:

> I believe my performance in third level was not as good as in second level because I did not try harder and was absent from classes. My part time job did not help my third level studies. My LCE achievement did not make me too cocky or too confident and did not give me a false assurance because I wanted to do the B.Comm in UCC but did not have enough points to gain entry to B.Comm with German that particular year. I was de-motivated when I did not get the B.Comm offer. I believe the Business Studies course is a good practical course. Absence from classes definitely interfered with my progress in third level. I think one could be absent from classes in University and get away with it but not in CIT as the classes are practical.
> **[Student B]**

> I feel that having achieved high points 440 in my case it provides a false assurance policy that third level study can be managed while at the same time doing a part time job. Students who achieved less points from the LCE would probably feel more insecure in their studies and less confident and make a greater effort in third level.
> **[Student A]**

> I believe my performance in the LCE 460 points was due in part to the fact that I did not have a job during these studies and I concentrated fully with all my time on them. However, absence from classes in my Business Studies course, couldn't catch up with study and the job interfered with my performance in the Business Studies course and this is evidenced by the marks I was awarded. Students with 100 points of entry less than me or worse than me came out at the end of the first year with scores always above mine.
>
> In the second year of my course I left at Christmas due to pressure of work.
>
> I was motivated mainly to get a job. I did not do enough reading while on the course and only done a few examination questions in Accounting before examinations. I did not develop any special study methods for my examinations.

Although I got 460 points it did not give me any false assurance or confidence. This was because I did not really think 460 points was a fantastic score. Indeed my fellow LCE students had achieved this and even better in many cases.

I am still working in Marks and Spencers and would like to return to third level education and continue my studies. I am very interested in the continuation and adult education course and hope to get exemption from first year at night with the one year that I passed in the full time course in CIT.
[Student F]

I would account for my academic performance being so good in LCE and being so bad in third level as due to my hectic social life. I repeated my LCE and had a hectic social life that year too. My weekends would start on Thursday and finish on Monday, and as a result I lost motivation to study. I failed my first year and did not return to year two. I was also on drugs during my studies. In 1997 instead of returning to year two which the regulations would not allow, I took up a job in the Hospital as a porter. I was motivated by the attitudes of the other porters to return to do a BA in UCC. They were saying every day how they could run the world and after twenty years they were going nowhere. This pushed me to return to College. I am doing well now.
[Student J]

High Entry Points and High Academic Achievement:

I was motivated to do well. Indeed it was very important to me to do well. I worked hard for my LCE and done more study for the LCE than for the Business Studies course. There was more time off in the college between classes than in secondary school. There were new subjects but Accounting in LCE was a great help to me. I also helped other students in my class with Accounting as they had not studied Accounting in their LCE and found the subject very difficult for them. I also wanted to go on to do the Diploma in Accounting.

I understood that in year one you only needed to pass to get into second year but in second year a merit or greater was needed to get on to the Diploma in Accounting. I could sit back and go for just a pass in year one but I wanted to do well and worked to get a good result which I believe I did.

I was motivated to get a job and to please my parents. I read enough I think and did past examination questions as preparation for my examinations.

I worked hard for LCE and did not take my foot off the accelerator when I went into third level studies. My progress was therefore consistent from second level to third level.

There was no pressure on me to go to third level I just wanted to do it myself.
[Student G]

(ii) **Tabulation of Responses**

Table 24 shows an analysis of selected case studies interviewees' responses. Attendance at lectures is shown as a very important characteristic in succeeding in the Business Studies Course. No student with 50% to 70% attendance completed the four years of the course while students with 70% to 90% attendance were all successful. With regard to Business Studies subjects attempted in the LCE, all students who had not attempted Accounting did not complete the course while the two students who had attempted the subject successfully completed the four years. With respect to the choice of course, most interviewees would have accepted a Bachelors Degree in Business Studies, Commerce or related areas in preference to the National Certificate course. However, interviewees did not have the choice of accepting a degree course because of insufficient points from their LCE. Three or four interviewees who successfully completed the course had the minimum points of 330. Although a student needs 55% marks minimum after second year to proceed, all students in the above table who succeeded had over this score in first year where it was not required of them.

Table 24

Distribution of Case Responses

Student Female = F Male = M	Points	Academic Performance 3rd Level				Choice of Course	Business Studies Subjects Attempted	Number of hours study after class in 3rd Level	Attendance	Part Time Employment	Favourable or Adverse Interference	Other Comments
Student A		Yr1	Yr2	Yr3	Yr4							
M	440	39.8	N/A	N/A	N/A	NCBS Law Degree	Bus. Org. Enjoyable	5 to 8 hrs	50% to 70%	Yes	Part-time job interfered adversely	Attending classes is more important than studying outside of classes
Student B												
F	415	44.7	46.3	N/A	N/A	NCBS B.Comm	Bus. Org. Economics	5 to 8 hrs	50% to 70%	Yes	Absence from classes	In reality the NCBS was my second choice the Degree of B.Comm was my first choice
Student C												
M	330	35.0	41.7	N/A	N/A	NCBS BA	Bus. Org.	5 to 8 hrs	50% to 70%	Weekend only	Absence and part-time job	I just do enough to get by in Leaving Certificate or in Third level business studies
Student D												
M	330	59.3	63.0	59.6	63.0	NCBS BBS	Economics	5 to 8 hrs	70% to 90%	Regular part time job	Part time work did not interfere adversely	My real first choice was the BBS in Waterford IT

Student Female = F Male = M	Points	Academic Performance 3rd Level				Choice of Course	Business Studies Subjects Attempted	Number of hours study after class in 3rd Level	Attendance	Part Time Employment	Favourable or Adverse Interference	Other Comments
Student E												
M	330	60.2	56.5	66.7	63	NCBS BBS	Accounting	5 to 8 hrs per week	70% to 90%	None	Having done accounting helped a lot	I helped others in class who had not done accounting in their LCE. People fail being on the wrong course
Student F												
	460	44.4	N/A	N/A	N/A	NCBS BIS Degree	Bus. Org.	Less than 5 hrs per week	Less than 50% of lectures	Yes	The job destroyed my 3rd level studies	The degree in UCC was my real first preference
Student G												
	435	69.8	73.8	67.2	76.0	NCBS BIS Degree	Accounting	5 to 8 hrs	70% to 90%	Yes 8 to 16 hours	Absence from classes has adverse effect	Degree my real first choice. Made it my business to ask questions.
Student H												
	330	61.2	55.7	57.3	44.0	NCBS BA	Bus. Org.	5 hrs more before exams	70% to 90%	Weekends	Studying and attendance favourable	Without basic accounting in my Intermediate Certificate it would have been difficult.
Student I												
	330	59.2	55.2	N/A	N/A	NCBS DITBS	Non	5 hrs per week	70% to 90%	Regular part time job	Motivated to get a job	Accounting and Law brought down my marks in second year

Student Female = F Male = M	Points	Academic Performance 3rd Level				Choice of Course	Business Studies Subjects Attempted	Number of hours study after class in 3rd Level	Attendance	Part Time Employment	Favourable or Adverse Interference	Other Comments
Student J												
	390	14.0	N/A	N/A	N/A	NCBS Degree	Bus. Org.	Non	Less than 10%	Regular part time job	Hectic social life adverse affect	Course was not my real first choice. Course boring I had no other alternative course

(iii) **Summary**

The research findings in this section gives an insight into why students with minimum LCE achievement perform well in the NCBS, NDBS and BBS and why students with high LCE achievement perform poorly on the course.

Students with minimum LCE points perform well for many reasons including: students liked the Business Studies subjects and did not like LCE subjects which were mandatory. Interviewees also revealed that they did not like secondary school, and felt the atmosphere in third level provided them with a more conducive environment to get on with studying the discipline they liked. Another point expressed was the fact that students with low entry points did not know the entry points of the other students in the class and consequently they did not feel more inferior than the more highly achieving. This is a problem at second level where students are streamed into different classes and students become more identified as less and more intelligent.

Students with high LCE points did not achieve academic performance in their third level course to match their LCE because: Part time jobs did not help with study and particularly contributed to absences from classes. In a few cases students did not have part time jobs while studying for their LCE and were unable to keep their part time employment in perspective at third level. Students who succeed in their third level studies and have part time jobs appear to be able to plan their workloads better.

Another factor that emerged is that students who achieved high points relative to gaining entry to the NCBS in the Institute of Technology did not have enough to gain entry to Degree Courses in UCC and other Universities and this de-motivated them in a course of their second or later preference in reality.

Interviewees also claimed that they worked harder for their LCE studies than third level Business Studies.

SECTION 3
INTERVIEW FINDINGS

INTRODUCTION

This section provides the responses from interviewees for this research. As the number of words in this thesis is limited, it became necessary to summarise the interview responses in tabular form. Quotations from interviewees are on file. Firstly, interviews with students who had not attempted any of the Business Studies subjects of Accounting, Business Organisation or Economics in their LCE as revealed in section one of this chapter will be described. Secondly, responses from students taken at random from students in the technological sector of Higher Education in Ireland will be provided. The third section will focus on interviews with students from all eight Universities in the Republic of Ireland and North of Ireland. The Private College sector will be dealt with in section four. The fifth section will deal with interviews through focus groups in the technological and University sectors of Irish Higher Business Studies education.

The undermentioned table sets out the numbers and percentages of interviewees who participated in the interviews:

Table 25
Distribution of Interviewees for this Investigation

	N		%
Cork Institute of Technology			
No LCE Business Studies Subject	16	16	16
Cork Institute of Technology and Other Institutes of Technology		16	16
Irish Universities:			
Dublin City University (DCU)	3		
Dublin University (TCD)	4		
The Queens University Belfast (QUB)	3		
University College Cork (UCC)	5		
University College Dublin (UCD)	2		
University College Galway (NUIG)	4		
University of Limerick (UL)	4		
University of Ulster (UU)	3	28	28
Private Sector		3	3
Focus Groups (Number of Interviewees)		37	37
Total Number Interviewed		100	100%

(i) **Students who had not attempted a Business Studies subject in LCE**

Table 26 shows that the reason students did not attempt a Business Studies subject in their LCE was that they did not think of studying a Business subject at the time of selecting their LCE subjects and time table clashes with other subjects that students wanted to study. Fifteen of the sixteen students who had not attempted a Business Studies subject explained that it would have been a definite advantage to have studied a Business Studies subject. Fourteen of the sixteen students felt that Accounting was the most important of the three Business Studies subjects in the LCE.

Table 26

Distribution of students who had not attempted a Business Studies subject in their LCE

Entry Points	Reason for not studying Business Studies in LCE			Study of Business Studies subject would be a definite advantage to me in third level	Study of Business subject would not be an advantage to me	Particular subject of benefit if I had studied it in LCE		
	Did not think of studying BS when selecting LCE subjects	Time Table Clash	Business Studies Teacher discouraged study of BS Subject			ACCOUNTING	BUS. ORG.	ECONOMICS
330		/		/		/		
335		/		/		/		
335		/		/		/		
335			/	/		/		
340		/		/		/		
340	/			/				/
350	/			/		/		
350	/			/		/		
355			/	/		/		
365	/			/		/		
370	/				/			
375		/		/		/		
390		/		/		/		
395	/			/		/		
410		/		/		/		
410	/			/		/		
	7	7	2	15	1	14		1

(ii) **Students in Institutes of Technology**

Table 27 shows distribution of responses from a random selection of interviewees in the Institute of Technology sector studying Business Studies. Responses concerning the study of Accounting, Business Organisation or Economics in the LCE are summarised. The overwhelming majority of interviewees emphasised the importance of Accounting and rated the study of it at LCE stage to be very important. Students who had not attempted the subject at LCE indicated that they had not pursued the subject beyond first year where it is mandatory. Interviewees did not appear to rate the subject Business Organisation as important to them in their studies at third level. The two students who had studied Economics considered the subject very useful to them in their post LCE learning experiences.

With regard to students who felt they had a higher level of achievement in the third level Business Studies than they had achieved in their LCE studies, there were mixed responses. Most of the students who had studied Accounting in LCE claimed that they had a higher level of achievement at third level and felt this helped them. A number of interviewees indicated that third level was more interesting than their study experiences at second level and this helped them to achieve better academic performance after their LCE.

Table 27
Summary Distribution of Students' Responses
From Interviewees in Institutes of Technology

Points	Respondent felt achievement was higher in third level than in Leaving Cert.	Respondent felt achievement about equal	Respondent felt achievement in Leaving Cert. higher than in third level	Possible reason	Business Studies Subjects in Leaving Certificate				Attendance
					Accounting	Business Organisation	Economics	How Important	
350	Yes	No	No	Liked Bus. Studies	Helped with study and to pursue	Not that important	N/A	Accounting very important	Satisfactory
365	No	Yes	No	Studied equally hard	Helped	Not useful	N/A	Accounting very important	Very important
Not Given	No	Yes	No	Studied equally hard	N/A	N/A	Very useful	Accounting would have been useful. I did not continue it	Very important
410	No	No	Yes	No Business Studies subject to help in 3rd level	N/A	N/A	N/A	Accounting a struggle for me	No response
Not Given	No	No	Yes	Domestic problem	Helped	N/A	N/A	Very important	Missing classes ruined my first year
N/A	No	No	Yes	Innature	Helped	N/A	N/A	Very important	Attendance essential

Points	Respondent felt achievement was higher in third level than in Leaving Cert.	Respondent felt achievement about equal	Respondent felt achievement in Leaving Cert. higher than in third level	Possible reason	Business Studies Subjects in Leaving Certificate				Attendance
355	Yes	No	No	3rd Level more interesting	N/A	Business Organisation	N/A	Business Organisation basic	Absences creates difficulties
335	Yes	No	No	3rd Level freedom	Studied Accounting	N/A	N/A	No response	No response
400	Yes	No	No	3rd Level more interesting	Studied Accounting	Studied Business Organisation	N/A	Accounting very important	No response
355	Yes	No	No	Business subjects in LCE	Studied Accounting	Studied Business Organisation	N/A	Accounting important for study and continuing	No response
385	No	Yes	No	Did not work as hard in 3rd Level	Studied Accounting	N/A	N/A	Accounting very important	Very important
400	No	Yes	No	Same	N/A	Studied Business Organisation	Studied Economics	Economics very useful. Would be better off studying LCE Accounting	No response
275	No	Yes	No	Similar	N/A	Studied Business Organisation	N/A	Disadvantage not having studied Accounting	Very important
340	Yes	No	No	No Comment	Studied Accounting	Studied Business Organisation	N/A	Accounting very important	No response

Points	Respondent felt achievement was higher in third level than in Leaving Cert.	Respondent felt achievement about equal	Respondent felt achievement in Leaving Cert. higher than in third level	Possible reason	Business Studies Subjects in Leaving Certificate				Attendance
445	No	Yes	No	No Comment	N/A	N/A	N/A	Physics helped	No response
385	No	No	Yes	No Comment	Studied Accounting	Studied Business Organisation	N/A	Accounting very important	No response

(iii) Students in Universities in Republic of Ireland and Northern Ireland

Table 28 shows distribution of students responses from interviews with students in the University sector in Ireland. 20 (71%) attempted one or more Business Studies subjects in their LCE while 8 (29%) did not attempt any. A substantial majority of interviewees claimed that LCE or General Certificate of Education Accounting was very important to them in pursuing their studies at third level. Economics was also considered to be a useful subject in preparing for third level Business Studies. Business Organisation was not considered to be an important subject as a preparation for third level Business Studies. With regard to comparing academic performance in second and third level, mixed responses were given of the possible reasons and a definite trend was not established from the above table.

Table 28

Summary Distribution of Students' Responses
From Interviewees in Irish Universities

Student	Achievement higher 3rd Level than LCE	Achievement similar in 3rd Level as LCE	Achievement higher in LCE than 3rd Level	Possible reason	Business Studies Subjects taken Leaving Certificate				Other Comments
					Accounting	Business Organisation	Economics	How Important	
B.Comm. UCC	N/A	N/A	N/A	-	Yes	Yes	Yes	Accounting very important	Bus. Stds should not be mandatory in LCE
B.Comm. UCC	N/A	N/A	N/A	-	No	Yes	No	Bus. Org. not much help	Had to put extra time into studying Accounting, because of not having it in LCE
BBS. UL	Yes	No	No	Worked harder	No	Yes	No	Basics	Had to do more work because of not having LCE Accounting
BBS UL	No	No	Yes	Parents and Teachers	Yes	Yes	Yes	Accounting Economics very important	A business studies 3rd Level student should study Leaving Cert. Accounting
BA DCU	No	No	Yes	Teacher Support	No	No	Yes	Economics useful	I found Accounting in 3rd Level very difficult

Student	Achievement higher 3rd Level than LCE	Achievement similar in 3rd Level as LCE	Achievement higher in LCE than 3rd Level	Possible reason	Business Studies Subjects taken Leaving Certificate				Other Comments
					Accounting	Business Organisation	Economics	How Important	
BSc. QUB	No	No	Yes	Supervision of teachers	No	No	No	Disadvantage having no BS subject	Physics and Maths helped with study of Accounting
BA UU	Yes	No	No	Worked harder at UNI	No	No	No	I had to put more time into Accounting and Economics	GCE Accounting a help in first year
BA UU	Yes	No	No	Better lecturing	No	No	No	Had to work hard at Accounting and Economic	Students with A Level Accounting had to do nothing in first year
UU BA	Yes	No	No	Worked harder	No	No	No	Disadvantage having no BS subject	Students with LCE Accounting and Economics could abstain from 1st year classes
DCU BBS	Yes	No	No	My choice of study	No	Yes	No	Basic	Accounting was difficult at DCU to study
QUB BSc.	No	Yes	No	Did not work as hard in 3rd Level	No	No	No	Accounting at A Level would have been useful	Students with Accounting from GCE had a much easier time than me

Student	Achievement higher 3rd Level than LCE	Achievement similar in 3rd Level as LCE	Achievement higher in LCE than 3rd Level	Possible reason	Business Studies Subjects taken Leaving Certificate				Other Comments
					Accounting	Business Organisation	Economics	How Important	
QUB Bsc.	No	Yes	No	Worked equally hard for 2nd and 3rd Level	No	No	No	Students with A Level Accounting would have less difficulty	Sought help from students who had A Level Accounting
B.Comm. UCC	No	No	Yes	Worked equally hard	Yes	No	No	Accounting very useful	I was going back over the same material at 3rd Level
B.Comm. UCD	Yes	No	No	Worked harder at University	No	No	Yes	Economics of little use in UCD	I had to work hard at Accounting and barely passed it
BBS UL	No	Yes	No	No Satisfactory response	Yes	No	Yes	Accounting important	Students who had not done LCE Accounting looking for help
DCU BBS	No	Yes	No	Hons Maths helped	No	Yes	No	Useful	I had to obtain grinds in Accounting
UCG B.Comm.	Yes	No	No	Choice of study	Yes	No	No	Vitally important	Students who had no LCE Accounting had difficulties in 1st year
UCC BA	No	Yes	No	Studied equally hard	Yes	Yes	Yes	All three useful	Economics very useful

Student	Achievement higher 3rd Level than LCE	Achievement similar in 3rd Level as LCE	Achievement higher in LCE than 3rd Level	Possible reason	Business Studies Subjects taken Leaving Certificate				Other Comments
					Accounting	Business Organisation	Economics	How Important	
UL BBSA	Yes	No	No	Doing what I wanted to do	Yes	Yes	No	Accounting useful	LCE Accounting definitely helped me in 1st year
TCD Bsc.	No	Yes	No	TCD motivation	No	Yes	No	Bus. Org. no benefit to me	Students with prior knowledge of a subject may absent from lectures
TCD BBS	N/A	N/A	N/A	Social distractions don't help	No	No	No	Not a disadvantage	Students who studied Economics in LCE did not come to classes in TCD
TCD BA	No	No	Yes	Social life	No	Yes	Yes	Useful	Accounting very important in LCE
TCD BBS	N/A	N/A	N/A	Un-satisfactory response	Yes	No	Yes	Economics very useful	I would not like to study Economics in TCD without LCE Economics
UCD B.Comm.	No	No	Yes	Parental control	No	Yes	Yes	Economics and Bus. Org. some benefit	I could not study Accounting in LCE as it was not available to me

Student	Achievement higher 3rd Level than LCE	Achievement similar in 3rd Level as LCE	Achievement higher in LCE than 3rd Level	Possible reason	Business Studies Subjects taken Leaving Certificate				Other Comments
					Accounting	Business Organisation	Economics	How Important	
UCC B.Comm.	No	Yes	No	Challenging translation 2nd to 3rd Level	No	Yes	Yes	Interesting	It would have been an advantage to have studied Accounting in LCE
UCC B.Comm.	Yes	No	No	Great learning experience in University	No	No	Yes	My first year was almost an arts year	No BS subjects provides a wider curriculum
UCD B.Comm.	Yes	No	No	Attendance at classes	N/A	N/A	N/A	Students with subjects may become complacent	Students with LCE Accounting should have an advantage
UCD B.Comm.	Yes	No	No	No substitute for attending lectures	No	No	Yes	LCE Economics packaged different to 3rd Level Economics course	A student could do just as well without LCE Economics before 3rd Level

(iv) **Students in Private Sector**

Table 29 shows that the students in the Private College sector enjoy small lecture or class groupings. In the University and Institute of Technology sector such class sizes would be classified as small tutorials supporting lecture groupings of much bigger numbers. All three interviewees claimed that their achievement in the Private College course was higher than that achieved in their LCE studies and claim that the size of class grouping helped in this achievement. The one student who had studied Accounting in the LCE suggested that it was a big advantage in third level studies. The points given by two of the respondents were lower than CIT students and would not have qualified for an offer by the CAO.

Table 29

Summary Distribution of Students' Responses In the Private Sector

Student	Achievement higher Private College than LCE	Achievement similar in Private College to LCE	Achievement higher in LCE than Private College	Possible reason	Business Studies Subjects taken in LCE				Other Comments
					Accounting	Business Organisation	Economics	How Important	
1. 275 pts	Yes	No	No	I enjoyed my studies Small classes	No	Yes	No	Bus. Org. helped with Economics and Management	Class small fifteen students and Accounting started from scratch
2. 260 pts	Yes	No	No	I enjoyed studying in Private College Small Classes	Yes	Yes	No	A big advantage to have studied Accounting	A student who failed Accounting in my class had not studied Accounting in LCE
3. Could not remember points achieved	Yes	No	No	Small classes in Private College	No	No	No	Not having attempted BS subjects was a loss to me	Accounting in 1st year was a struggle for me and I opted out of it when I went into second year

(v) **Focus Group Interviews**

Table 30 shows that of the 14 (39%) students who attempted Accounting in their LCE,13 (93%) of them felt that it was of a considerable advantage to them in their third level study of the subject in first year. 9 (64%) of them felt that they had a comparative advantage over fellow students who had not attempted Accounting in their LCE, 32 (86%) of the interviewees felt that extra points should not be given for attempting LCE Business Studies subjects. With regard to the nature of the advantage, thought process, terminology and content were frequent responses.

TABLE 30

ANALYSIS OF RESPONSES IN FOCUS GROUPS

Student	Business Subjects attempted in LCE	Value of the subject Accounting	Comparative advantage felt over fellow students who had not attempted the Accounting	Nature of advantage in the case of Accounting	Should extra points be given for LCE BS subjects	Other Comments
1.	Accounting Bus. Org.	A lot	Yes	Terminology and way of thinking	No	Different emphasis in Accounting disadvantage
2.	Accounting	Quite a lot	Yes	Terminology and Content	Yes	Complacency a disadvantage
3.	Bus. Org. Economics	-	Don't know	Don't know	Yes	-
4.	Bus. Org.	Don't know	Don't know	Don't know	No	-
5.	Bus. Org.	Don't know	Don't know	Don't know	No	-
6.	Bus. Org.	Don't know	Don't know	Don't know	-	-
7.	Accounting	A lot	Don't know	General	Yes	No comment
8.	Accounting	Quite a lot	Possibly	General	No	No comment
9.	Bus. Org.	-	-	-	No	-
10.	Bus. Org.	-	-	-	Yes	-
11.	Bus. Org.	Don't know	Don't know	Don't know	No	-
12.	Bus. Org.	-	-	-	No	-
13.	Bus. Org.	-	-	-	No	-
14.	None	-	-	-	No	-
15.	Economics	-	-	-	No	-
16.	Accounting Economics	A lot	Yes	Terminology	No	Different emphasis a disadvantage
17.	Accounting Bus. Org.	A lot	Yes	Terminology	No	Different emphasis disadvantage
18.	Bus. Org.	-	-	-	No	-
19.	Economics	-	-	-	No	-
20.	Accounting	A lot	No	Terminology	No	Complacency but not a disadvantage

Student	Business Subjects attempted in LCE	Value of the subject Accounting	Comparative advantage felt over fellow students who had not attempted the Accounting	Nature of advantage in the case of Accounting	Should extra points be given for LCE BS subjects	Other Comments
21.	Accounting Bus. Org.	A lot	Yes	Terminology Content	No	Complacency
22.	Bus. Org.	-	-	-	No	-
23.	Accounting Bus. Org.	A lot	Yes	Terminology	No	Complacency
24.	Bus. Org.	-	-	-	No	-
25.	None	-	-	-	No	-
26.	Bus. Org.	-	-	-	No	-
27.	Bus. Org. Economics	-	-	-	No	-
28.	Bus. Org.	-	-	-	No	-
29.	Accounting	A lot	Yes	Way of thinking familiar content	No	Complacency a disadvantage
30.	None	-	-	-	No	-
31.	Accounting	A lot	Yes	General	No	Different emphasis a disadvantage
32.	None	-	-	-	No	-
33.	Bus. Org.	-	-	-	No	-
34.	Accounting	A lot	No	Terminology way of thinking content	No	No comment
35.	Accounting Bus. Org.	Very little	No	Content	No	Different emphasis a disadvantage
36.	Accounting Bus. Org.	A lot	Yes	Terminology way of thinking	No	Maintaining interest when they move so slow
37.	Bus. Org.	-	-	-	No	-

Summary of Chapter

The first section of this chapter focused on quantitative data relating to over two hundred students in Business Studies. Of the three points ranges low, medium and high students in the high points range achieved higher scores in overall performance in third level Business Studies. The retention rate almost doubled from the lower points range to the higher points range in the study. This means that students with lower points range have a lesser chance of completing the four years of the course and being conferred with a BBS Degree.

With regard to the mandatory subjects of Mathematics and English, the subject Mathematics at higher level appeared to have advantages for students. Students with higher level Mathematics were unlikely to drop out early before first year examinations. They also had a higher retention rate overall in completing the four years of the course. The reverse appears to be the case in the subject of English where students with Ordinary level English achieved higher mean scores that their counterparts with Higher level English.

Of the three Business Studies subjects Accounting, Business Organisation and Economics available to students in LCE , Accounting is important to students studying Business Studies in third level according to the revelations in this study. It helps students studying Accounting in first year and students who have not attempted LCE Accounting are not inclined to pursue Accounting when it is optional after first year. It is clear also that students with LCE Accounting perform better in the subject in first year than their counterparts without the subject. However, the study shows that Business Organisation and Economics do not provide the same advantages for students.

Students with low points in their LCE do better at third level Business Studies because of hard work at study, careful attendance at lectures and the motivation of the third level culture over the second level culture.

On the other hand , students with high LCE Achievement do worse at third level Business Studies because of their lack of commitment to study including frequent absence from lectures and not putting in sufficient home work. Not having studied Accounting at second level is also a negative point. The lack of supports such as parental supervision and the second level culture when studying for the Leaving Certificate adversely affects students at third level.

There does not appear to be any significant relationship between choice of course, school attended and social status and academic performance at third level Business Studies.

These findings are analysed in the next chapter.

CHAPTER VI

ANALYSIS OF FINDINGS

Introduction

In the previous chapter the research findings were presented quantitatively and qualitatively. This chapter analyses the findings under the following headings: entry points, mandatory subjects, comparison of second and third level achievement, Business Studies subjects, tensions in LCE objectives, benefits of studying Business Studies subjects in LCE, course choice, school attended and social background, overall achievement year 1 to 4, longitudinal study of academic achievement, conceptual contributions of the research and summary.

Entry Points

Some high achievers in Business Studies did not have high LCE points, in relative terms when they entered the course. Studies including O'Rourke , Martin and Hurley (1989) and The Points Commission (1999) are worth considering. Prior research by O'Rourke, Martin and Hurley (1989) found that the use of aptitude tests added little or nothing to prediction compared to LCE performance on its own (p. 27). Many students who were admitted with high points were not subsequently academically successful. The Points Commission (1999) found that entry qualifications are a reasonable, but far from perfect predictor of Degree/Diploma academic performance in the higher education sector in Ireland. The study also found that factors besides points mediate the relationship between LCE and third level education academic performance(p. 29). The findings in this study echo the findings of the Points Commission about mediating factors and found in particular that a students commitment to study was very important.

A synthesis of the findings in Chapter 5 also found that there is some relationship between points and third level success in Business Studies **(Tables 2,p.85, 3,p.86, 4,p.87)**. Students with low points and no Business Studies subject, particularly Accounting from second level, seem to be at a disadvantage compared to their counterparts with high points and no Business Studies subject. It follows that students attempting Business Studies at third level with low points compensate by studying a subject like Accounting in their LCE. Earlier research by The NCCA (1998), The Institute of Guidance Counsellors (1998), ASTI (1998) and the TUI (1998) suggest that students choose subjects for their LCE motivated by the number of points that they can achieve (p. 35). Business Studies subjects will be dealt with later in this section.

Less than half of the students who attempted first year, (less than two in five) finished their BBS in four years **(Table 2,p.85)**. Flanagan, Morgan and Kellaghan (2000) reported that the number of students completing the NCBS course decreases as the number of points decreases (p. 29). According to research undertaken by Neumann (1989) attrition is a consequence of demanding learning conditions that do not provide a satisfactory level of support for the student (p. 38). An analysis of the students completing year four BBS shows that there was a higher percentage completing from higher points that from lower points.

Correlations between entry points and first, second, third and fourth year academic performance are positive but not perfect **(Table 4,p.87)**. The highest correlation was revealed in respect of the Diploma in Accounting year three and BBSyear four for male students while the lowest was recorded in respect of Diploma in Marketing year three for female students. Correlations were higher for female students in years one and two while the reverse was the case for male students in year three and four. Research undertaken by Buckley (1977) and Moran and Crowley (1979) found that first year University performance in UCC for different disciplines increased monotonically with the LCE scores (p. 25 ,26). The Conference of Heads of Irish Universities (1996) found a weak

relationship between points at entry and final Degree performance (p. 29). Similar to the research in this study, their study found that students with high LCE performance generally do quite well at University while students with modest points are also able to achieve degrees of distinction. This study would also share the view of the Conference of Heads of Irish Universities (1996) that students with lower points than the minimum 335 could have been admitted and could have achieved satisfactory performance in Business Studies (p. 29). Previous research by McNamara and Madaus (1969) found that there was a high degree of unreliability in the marking of LCE subjects (p. 25). Humphreys (1977) had reservations about using School LCE achievement as a predictor of third level academic performance (p. 25). Previous research by Humphreys (1977) found that LCE results are based on methodologies which have similarities with third level Examinations (p. 25). However, prior research by Murphy (1984) found that there was a significant but modest correlation between LCE and end of term examinations in the National Institute for Higher Education Limerick, now the University of Limerick (p. 26). An investigation by O'Dea (1984) in respect of engineering students at Sligo Institute of Technology found that performance in the LCE related to subsequent performance in the Institute (p. 27).

Mandatory Subjects

All third level education institutions in Ireland set down basic entry requirements for the courses which they provided. For Business Studies courses Mathematics and English or Irish are included as mandatory subjects for entry. The level of achievement is not set down, it could be either Higher or Ordinary level. The ACCA (1999), The ICAI (1998), The CIMA (1998) emphasise that a student must have Mathematics and English in their LCE and will not accept the minimum scores but insist on a Grade D higher or Grade C Ordinary Level (p. 35).

As interviewees had to have passed Mathematics and English, there were no interviewees without the subjects that they could be compared with to ascertain if there were differences

in third level academic performance. However, previous research by C.I.T. (1984) where they administered a mathematical test to students of different disciplines found that the results were consistent with the score achieved in Mathematics in the students LCE (p. 26). Interviewees seldom mentioned the benefit of English. This may be due to the curriculum design in the LCE English course.

However, the quantitative section of this study revealed that generally with regard to students who successfully completed four year (BBS) students with higher Mathematics achievement in the LCE , did better than students with lower grades of achievement in the subject (**Table 5, p.90**). Research by Barden (1989) reported that Mathematics should not be studied as a subject in third level unless a student enjoyed Mathematics in their LCE studies. He further emphasised that the phenomenon of useful subjects such as Computer Studies can be a dangerous influence if the student lacks the abilities necessary to cope with studying the subject at third level (p. 28). With the exception of a negative correlation in the Diploma in Marketing for female students all correlations were positive, with the highest recorded for the Diploma in Accounting in respect of male students attempting the examinations.

Students achieving higher grades in English in their LCE do not appear to have an advantage in progressing to year four the BBS Degree (**Table 6, p.91**) . An exception to this is male students with poorer grades seem to do better. However, the number of students in the study for which satisfactory information could be obtained is limited. It appears that students with Higher Level English and higher points ranges do not perform

academically better in their final degree year than students with Ordinary Level English in their LCE **(Table 6, p.91)** .

With regard to comparing Mathematics with related subjects in the Business Studies course, there are positive correlations although not perfect. The correlation between Mathematics in the LCE and the subject Business Mathematics and Statistics in the Business Studies course is reasonable at r=530. The correlation between Mathematics and the subject Accounting in Business Studies is r=421. In both cases the correlation is higher for female students than male students in the study **(Table 8, p.93)** . Earlier research undertaken in 1996 by McGrath demonstrated that students who performed well in first year engineering had done well in LCE Mathematics (p. 28) and Somers (1992) found that points in LCE Mathematics are significantly related to fresher academic performance (p. 28). Research by Healy, Carpenter and Lynch (1999) claimed that students with low points ratings in LCE particularly in Mathematics were in most risk of non-completion (p. 40 ,41). Hurley and Stynes (1985) found that elementary techniques in Mathematics were not answered correctly by 69% of students (p. 26).

Comparison of Second and Third Level Achievement

When interviewees were asked to compare their achievement at a second level with achievement in third level there were a variety of responses. Many interviewees felt that what they were studying in third level was more interesting, they worked harder at their studies and felt they achieved higher scores at third level **(Tables 27, p.132, 28, p.136)**. Previous research by McCartney (1984) found that non academic factors were important in influencing first year examination results in University (p. 26). The Points Commission (1999) emphasised that a course should provide a positive learning experience and that there should be a reasonable prospect of successful completion of the course. Although there is a wide range of second level subjects, it was pointed out frequently that it was almost mandatory to study three languages, Irish, English and a European Language such as French or German. As Mathematics is a mandatory subject

for all Business Studies courses entry, very little choice of subjects was available to students at second level.

With regard to the time and effort put into studying , there was generally two types of response. On the one hand students who did better in their third level studies than second level emphasised the environment of the third level educational institution to stimulate them to work harder. Freedom from teachers and parents and taking on full responsibility for the first time in their lives to account for their academic performance was a positive incentive. On the other hand , students who felt they did better in second level than they did in third level pointed to the benefits of parent and teacher supervision in comparison to third level large lecture halls of students where they were not known to the lecturer **(Table 28,p.136)** . Prior research by Cook and Leckey (1999), reported that first semester students perceive to themselves to be doing less study than when at school. They also reported that the school environment provided strong parental and teacher support unlike the University where the learning is less structured and the lecture contact hours are fewer (p. 35,36). Research by Moran and Crowley (1989) suggested that there were a myriad of non-academic factors which contributes to a students success or lack of it (p. 26). These include emotional, family stress, lack of motivation and boredom in the academic routine.

Attendance at lectures was considered to be most important for success by the overwhelming majority of students whether in the Technological sector or the University sector. Poor quality lecturing, part time employment and living a distance from the College contributed to absences from lectures. Getting notes from friends was not considered to be a satisfactory substitute for attending lectures. Absences from lectures accumulated a mountain of study that could not be climbed by students **(Table 24,p.125)**. The prize for this was failure in Examinations. Earlier research by the Points Commission (1999) suggested that factors such as field of study, sector, gender, socio-economic background have degrees of impact on academic performance in higher education. Dale (1951) found that the main cause of failure in University Examinations was lack of

application to study (p. 37). A report by a select Committee on Education at Berkeley in 1966 pointed out the importance of student commitment. Previous research by Astin (1984) claimed that the greater the student's involvement in college, the greater will be the amount of student learning and personal development. He further suggested that academic involvement such as good study habits develops with working hard on studies (p. 37). Research by Pascarella (1980) explained that faculty contact was the important link between college investment and student achievement of his or her outcomes from a course of studies (p. 39).

It was found that students who had studied Accounting at second level were coming across similar material in the first and sometimes the second session at third level. Students became careless and absented themselves from lectures because of this. This was an observation by interviewees who had not attempted the subject and had to attend all lectures. This created bad habits in the discipline of study for students and it sometimes crept into other subjects (Section 2 and 3 Chapter 5). Research by Neumann (1989) defined the quality of learning experience as the students perceptions of the direct and indirect contributions that they receive from their educational institution (p. 38 ,39).

Business Studies Subjects

This study concerned itself with the three Business Studies subjects of Accounting, Business Organisation and Economics that a student could attempt in the LCE . Among the reasons for not studying a Business Studies subject in the LCE were timetable clashes with other subjects, unsure of future career at time of selecting LCE subjects after Junior Certificate and teacher influence at second level **(Table 26,p.130)**.

With regard to the different subjects, interviewees felt that studying Accounting at second level whether for the LCE or the General Certificate in Education was very important to them, particularly in first year at third level. Interviewees who had not attempted the

subject claimed that they had difficulties studying Accounting in first year. Responses also revealed that extra time and effort had to be given to the subject at Institute of Technology or University studies. Another characteristic of students who did not attempt Accounting at second level was that in the overwhelming majority of cases they opted out of the subject when a choice had arisen at second year **(Tables 26,p.130, 27,p.132, 28,p.136, 30,p.144)** .

Business Organisation was a very popular subject with interviewees in this study. Interviewees felt that the subject was useful but not important to them in pursuing their third level study of Business Studies. Typical responses were that the structure of the curriculum underpinning the subject was somewhat scattered and it only provided basic knowledge. No student who had not attempted the subject indicated any specific deficiency as a result. Breathnach (1988) found that no third level college in Ireland recommends Business Organisation as a subject for foundation study to pursue third level Business Studies (p. 27).

The least number of interviewees attempted Economics in their LCE or General Certificate in Education. There were mixed views by students who had attempted the subject at second level. These views ranged from the subject being very useful to familiarity with students who achieved better results in third level Economics without having studied the subject at second level. In 1999 Walsh and Garvey found that students in U.C.D who had studied Economics in their LCE achieved an average mark of 47% in the subject whereas students who had not attempted the subject before attending University achieved 42.2% in the subject (p. 28). Findings by Harbury and Streter in 1965 indicated that students with GCE Economics had done marginally better in the marks achieved in their University studies in first year Economics. Previous research by Harbury & Szreter (1968) found that there was no difference in the marks in Economics and other subjects for two groups with and without Economics (p. 30).

Interviewees felt that it was not necessary to award extra points for having attempted a Business Studies subject or subjects at second level when making application for a place on a third level Business Studies Certificate or Degree course. It was felt that awarding extra points for Business Studies subjects would be unfair to students who had not attempted them and had studied alternative subjects such as Physics that broadened their curriculum of studies **(Table 30,p.144)** . Research by Somers in 1997 showed that prior learning in a favourite subject would provide the student with a better chance of higher grades in related tertiary subject and consequently ease the transition to tertiary education (p. 28). Research by Beausang (1977) reported that selection procedures should give priority to LCE subjects which are most relevant to the specific course to be pursued at third level (p. 29). Buckley (1977) supported this view (p. 25). A research paper commissioned by the Points Commission Humphreys and Jeffers (1999), pointed out the importance of studying subjects at second level that would be relevant to a students choice of study in third level (p. 33 , 34).

Students who had attempted Accounting in their LCE emerged with higher scores overall in range 59 to 54 in first year **(Table 9,p.95)**. Students who had attempted the subject achieved higher scores in first year Accounting **(Table 12,p.98, Figures 4 and 5).** Students with Accounting in their LCE also represented a higher proportion of students succeeding in first year. In second year students with and without Accounting in their LCE achieved equally high scores in Business Studies. More students without LCE Accounting did not present themselves for the first year examination in Business Studies. In second year of the fifty six students who did not present themselves for the end of year examination, the number of students who had and had not attempted Accounting in their LCE was almost equal.

Tensions in LCE Objectives

The objectives of the LCE is to provide students with a second level education to enable them to pursue a career in employment or pursue a third level course. Some of the obvious tensions with the subject Accounting can be expressed thus:

- Students who have studied Accounting in their LCE studies and study Accounting again in third level first year, have already studied a significant part of the third level curriculum in the subject. (Comparison of LCE syllabus and Year 1 third level NCBS syllabus).

- Students who have not studied Accounting in LCE explain the main reason was time table clashes with other LCE subjects **(Table 26,p.130)**.

- Students who have studied Accounting in LCE studies have a particular subject benefit in studying Accounting in first year third level **(Table 26,p.130)**.

- Students who have not studied the subject in their LCE are at a significant disadvantage in first year Accounting studies compared to students who have studied the subject **(Table 12,p.98)**.

- Allowing students with and without Accounting in their LCE in the same class in first year Accounting provides students without the subject in LCE with a handicap which necessitates a huge workload to catch up with their counterparts who have studied the subject at second level senior cycle **(Table 12,p.98)**.

- Accounting appears to be the most important of the three Business Studies subjects in LCE **(Tables 27,p.132, 28,p.136, 29,p.142, 30,p.144)**.

Students who attempted Accounting in LCE felt they had a comparative advantage over their fellow students who did not attempt the subject when studying first year Accounting **(Table 30,p.144).**

The highest positive correlation was found between Accounting in LCE and BBS year four for male students r=.565 **(Table 15,p.103).**

Attempting Business Studies subjects such as Accounting and Economics in particular may have hidden advantages for students in third level Business Studies. These hidden advantages not statistically visible includes allowing the student to put more time and effort into other subjects **(Table 26,p.130).**

The overwhelming majority of students pursuing the Accounting Diploma in year three had attempted Accounting in their LCE prior to entry to the NCBS course **(Table 9,p.95).** Four out of the five students who had not attempted the subject were successful in the Diploma examinations.

Students with Accounting and Business Organisation attempted in LCE achieve the highest mean overall achievement in year 1 Business Studies **(Table 13,p.99).**

Students with Accounting in their LCE achieve higher scores in first year mandatory Accounting in Business Studies **(Table 9,p.95)** but this do not carry through to overall performance in first year Business Studies. There may be a number of explanations for this including:

(1) Accounting as a subject in the LCE is a very structured specialised subject and may not help with the learning of the other Business Studies subjects in first year and

(2) Students may be using the advantage of studying LCE Accounting to provide more free time rather than increasing the input to the other subjects.

(3) The skills required to study other subjects with essay type answering are different to those required to study Accounting which is more quantitative.

The results of this study support Clarke's (1989) study which found that it was an advantage for the first level Accounting student to have taken Accounting at secondary school (p. 28). This researcher shares Clarke's view that students exposure to Accounting at second level helps to mitigate the drop in failure rate among first year Business Studies students during their most vulnerable time in third level education. Prior research by Baldwin and Howe (1981) found that study of Accounting before entering University helped students in the first part of first year in the subject (p. 30 ,31) while Eskew and Faley (1988) reported that exposure to second level Accounting facilitated student performance throughout the University course (p. 31). Previous research by Bourner and Hamed (1997) found that there was no simple relationship between non-A-level entry qualifications and Degree results (p. 31). According to studies in the United Kingdom students with GCE-A- Level relevant subjects had better academic performance in year 1 than other student's, but they do not show better academic performance at degree level.

Benefit of Studying Accounting, Business Organisation or Economics in the LCE

The cohort investigated was split into those students who attempted the subject and those who did not and in the case of Accounting, academic achievement in the subject at third level. In the case of all three subjects, overall academic performance in each year of the course. Statistical analysis revealed that students with Accounting in their LCE achieved higher scores in their overall performance in year one. In the case of Business Organisation the difference was marginal in favour of students who had not attempted the

subject in their overall scores in year one. The Economic scores showed that students with the subject scored higher in year one of the subject at third level than their counterparts who had not attempted LCE Economics. However, the apparent differences in overall academic performance in year one were marginal and the differences for other years were marginal and mixed **(Tables 9,p.95, 10,p.96, 11,p.97).**

The over arching influence of points needed to be considered. It was decided to divide the students into three groups, low points 330 to 345, medium points 350 to 370 and high points 375 to 460. Analysis here revealed that students with LCE Accounting scored higher in the subject at third level **(Table 12,p.98).** There were only marginal differences between students in the different points ranges. In the case of Business Organisation and Economics the apparent differences were marginal and mixed between students who had and had not attempted the subjects in their LCE **(Tables 9,p.95, 10,p.96, 11,p.97).**

Course Choice, School Attended and Social Background

Four out of five students for whom information on choice could be obtained had classified the Business Studies course as their first choice on their formal application to the CAO. Less than one in five had given a second preference to the course. There was no apparent trend between choice and progression to the BBS Degree **(Table 16,p.104).** A negative correlation was revealed between choice and progression to the BBS r=-.209. There was also a negative correlation between choice and progression to second year **(Table 17,p.105).** Earlier research by ITL (1998) reported that there was an onus on Higher Education Colleges to provide accurate information to applicants that will enable them to make an informed choice of course (p. 32).

Prior Research by Sligo Institute of Technology (1998) and the Admissions Officers Association (1998) emphasised that more specific information on detail of previous years

applications, the number of students who did and did not get an offer of a course and points ranges should be available to prospective students before making their application (p. 32). Research in (1999) by Moogan, Baron and Harris emphasised the risk involved in choosing the right course and the right College (p. 32 ,33).

The vast majority of students came from Secondary Schools followed by Community Schools. A little over half of the students coming from Secondary Schools progress to the BBS while a little over a third coming from Community type schools progressed to this level of award **(Table 19,p.108).**

Correlations between social status and progression to BBS were negative with the exception of male students in year one and two where the positive correlations were very low indeed **(Table 20,p.110).**

The highest category of students for which background information could be obtained was farmers, relatives and farm managers. One in three of these progressed to the BBS. The next highest group was skilled manual workers and almost an equal proportion of this category of students achieved the BBS award. Four students came from unskilled manual workers and three of them were awarded the BBS which represents the highest category success rate in respect of the Socio-Economic groups represented in the study. The smallest success rate of progression was recorded in respect of category known as employers and managers. Less than one in five of this category progressed to the BBS award **(Table 20,p.110).**

Overall Achievement Year 1 to Year 4

Moran and Crowley (1979) suggested that a student who passes first year University Examination has been fully accepted by the University in accordance with its own criteria for assessment and any subsequent failure for instance in years 2, 3 and 4 to graduate

indicates faults in the assessment rather than in pre-University assessments (p. 26). Nevin (1974) claimed that there was a significant correlation between passing first year science in University and obtaining a Degree (p. 25).

Of the ten case studies from the two extremes, Low Points and High Points, students who had achieved less than 50% in their first year Examinations did not complete the four years of the BBS course. On the other hand all students who had achieved over 50% in first year successfully completed the four years of the course **(Table 24,p.125).** Therefore, the quality of success in first year Business Studies is a very good indicator of success in subsequent years of the course.

Longitudinal Study of Academic Achievement

The correlations between academic performance in year one and year two of the NCBS are positive, in that female students have a slightly stronger positive correlation than their male counterparts. Very strong positive correlations revealed in respect of the relationship between second year performance and the NDBS in Accounting for male students. A good predictor of success in third level Business Studies is students who succeed in first year rather than the quality of their LCE results **(Table 21,p.112).**

The Correlations between first year and BBS fourth year are less positive than between first and second year **(Table 21,p.112).** Some of the explanations for this is the number of students who are not eligible because of their second year results to proceed to third year and the BBS Degree.

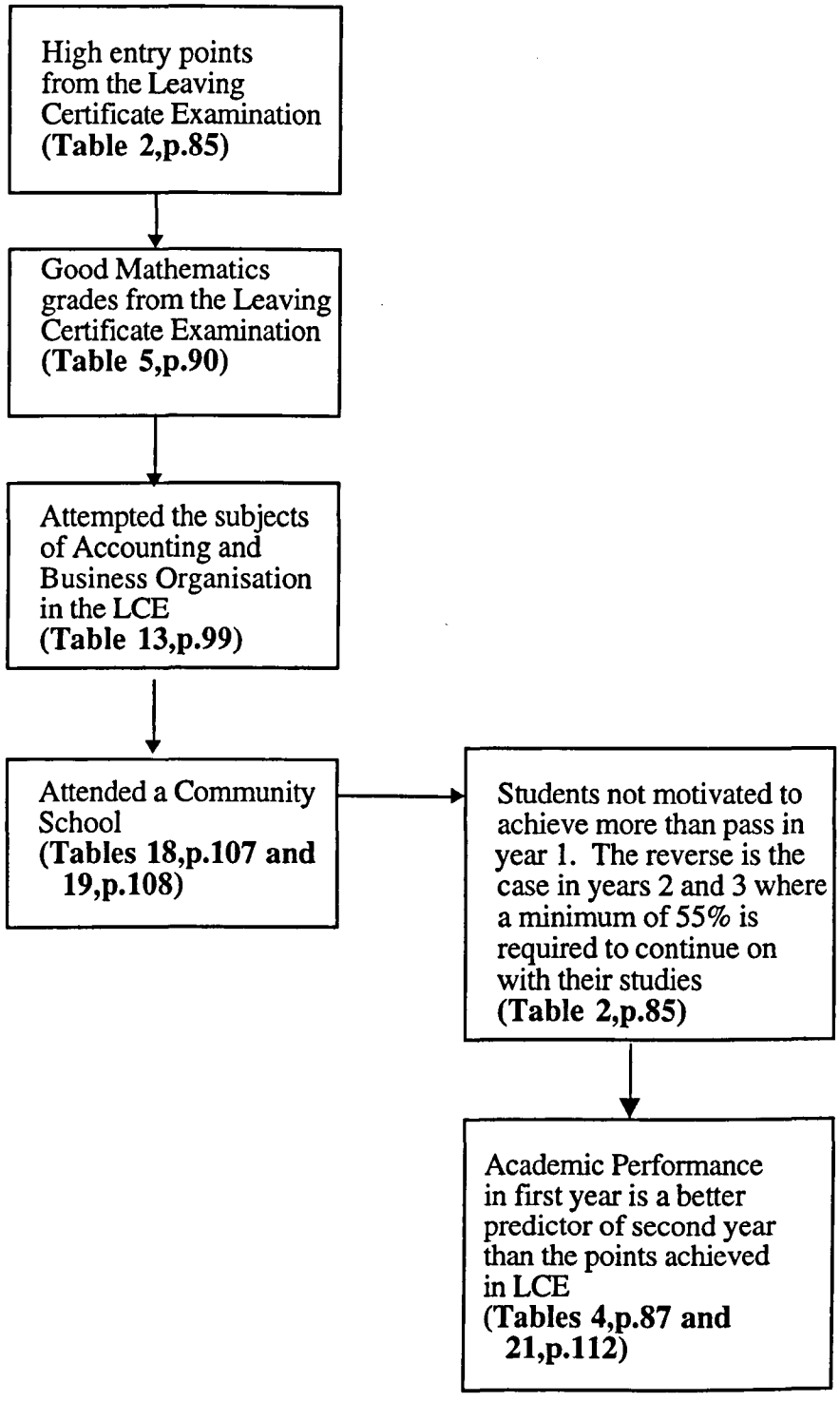
Students appear to use the target of passing their examination in first year to progress to second year. However, in second and third years it is clear that students strive to achieve the 55% to get entry to continue on to third and fourth years respectively.

FIGURE 8

Summary

Photofit of the Successful First Year Business Studies Student

Figure 8 synthesis of the successful Business Studies student.



In addition, students having studied a Business Studies subject or subjects in their LCE may have hidden advantages in studying their first year Business Studies at third level. This may leave students with more time to study new subjects such as Law.

Students who have not studied Accounting in their LCE do not as a rule elect to study third year Accounting. Students who have not studied Accounting in their LCE are more inclined to study Marketing **(Table 13,p.99).**

The points allocated by the CAO embraces all LCE subjects attempted by a student. This appears to be a good indication of performance in third level Business Studies. However, it is not a perfect indicator.

Twenty students who registered for first year Business Studies, did not attempt their first year examinations. 19 (95%) of them had ordinary level Mathematics in their LCE and 1 (5%) Higher D in the subject **(Table 7,p.92).**

Of the 185 students who attempted year 1 examinations 67 (36%) had in the range 330 and 345 points, 59 (32%) 350 to 370 points and 59 (32%) 375 to 460 points. More students in the higher points range progressed further to attempt the year, year 3 and year 4 examinations than their counterparts in the lower points range **(Table 2,p.85).**

With regard to studying Business Studies subjects at second level, interviewees claim that studying Accounting in particular provides advantages in studying Business Studies at third level **(Table 26,p.130).** Statistical analysis is not so clear on this. Explanations for this includes; advantage for first year students with the subject Accounting. Beneficial for students who intend to pursue Accounting after first year and major in Accounting. The provision of hidden help with the study of other subjects particularly in first year, where a student with LCE Accounting can allocate more time to the study of other subjects. These qualitative aspects are not revealed by quantitative analysis.

The findings here show that students who accepted their second choice or above had no influence on their subsequent academic performance. Indeed there were negative correlations between choice and overall academic performance in all years of the course.

Conceptual Contributions of the Research

Introduction

As the quantitative studies undertaken of third level students academic performance have not provided a perfect correlation with LCE achievement Moran and Crowley (1979) p. 26), The Points Commission (1998) p. 29) and Conference of Heads of Irish Universities (1996) p. 29), this study attempted to find answers through qualitative research. Students with low entry points and high academic performance and high entry points and low academic performance were selected using theoretical sampling. The case studies revealed three constituent elements:

Phase one, antecedent to the course

Phase two, during the course

Phase three, outcome of the course

These phases are continued below

Towards an Outline Framework of Student Academic Performance

An analysis of the interview data in this study helps to explain why students with low entry points perform better academically at third level and students with high entry points perform academically worse at third level. An analysis of the relevant literature together with the interview data gathered from participating students suggests that rationale can be subdivided into three distinct stages, contributing to the development of an initial explanatory framework of the third level Business Studies student. The framework consists of antecedents to the course, during the course and the outcome of the course of study.

The responses from the interviews can be structured in outline using the three phases as follows:

Phase One:

Antecedent to the Course

- Students with low entry points and high academic performance in Business Studies course would prefer a Degree Course to the course they were studying i.e. NCBS.

- Students with high entry points and low academic performance while accepting the National Certificate course would prefer a Degree course and accepted the course as a second choice in reality.

- The majority of interviewees studied a business subject in their LCE course, either Accounting, Economics or Business Organisation.

- The student interviewed enjoyed studying their Business Studies subject in Secondary School.

- Students with high achievement in LCE and low third level academic performance did not have a regular part-time job during LCE studies.

- Students with minimum entry points felt their secondary school environment and curriculum did not motivate them to their potential.
  (Tables 24,p.125, 26,p.130, 27,p.132, 28,p.136, 29,p.142, 30,p.144).

Phase Two:

During the Business Studies Course

- Students with low entry points and high academic performance in third level found the course interesting and easy.

- Students with high entry points and low performance found the course interesting.

- Students with high entry did not plan their homework studies whereas some students with low entry points did plan their homework studies.

- Social life in the Institute during academic terms was of no importance to students with high entry points and low academic performance.

- Social life in the Institute during academic terms was of importance to students with low entry points and high academic performance.

- Most interviewees did not reside at home during attendance at the Institute.

- Most students in the study appear to have a regular part time job during their studies in the Institute.

- Students with high entry points and low academic performance indicated that they did not work as hard on the Business Studies course as they did for their Leaving Certificate Studies.

- Students with low entry points and high academic performance indicated that they did not like their LCE subjects but that they liked their Business Studies course.

- Interviewees did not avail of grinds or get involved in group study methods in the Business Studies course.

- Students who performed better in Business Studies that their LCE explained that the third level environment motivated them better.

(Tables 24,p.125, 26,p.130, 27,p.132, 28,p.136, 29,p.142, 30,p.144).

Phase Three:

Post Course Outcomes

- Students with high academic performance continued their studies further.

- Some students with low academic performance commenced studies with other higher educational institutions.

- Outcome of course experiences showed that high class attendances were reasons for success and high class absences were reasons for failure in the course.

- Students with high entry points and low academic success suggested that regular part time jobs harmed their studies.

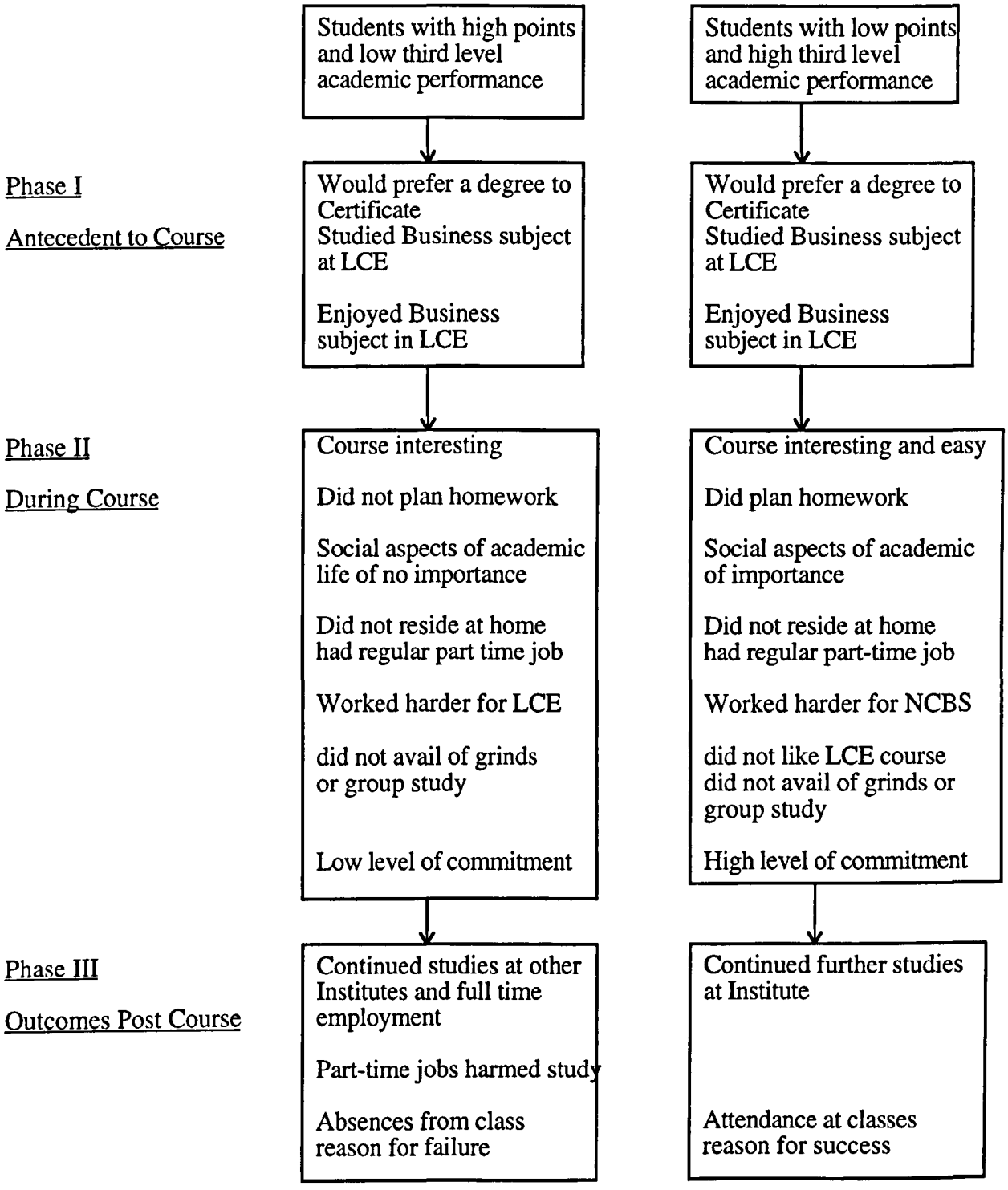
- All interviewees were positive about their experiences in the Institute.

- Interviewees suggested that success or failure was up to the student him or herself.

(Tables 24,p.125, 26,p.130, 27,p.132, 28,p.136, 29,p.142, 30,p.144).

Figure 9

Three Phase Framework of Business Studies Students Second Level and Third Level Academic Performance from Interview Information



(Research findings Chapter 5)

Concluding Remarks

This study attempted to study the relationship between entry qualifications and student achievement of third level Business Studies students in Ireland, with particular reference to CIT in the period 1996-2000. A fundamental issue is the points earned from the LCE (their second level education). This is the admission ticket to third level Business Studies courses in this country. This research shows that the students entering third level with the minimum points can be high achievers as well as students with high points. However, the probability for high achievement and retention is higher among students with higher points.

Of the two mandatory subjects Mathematics and English, the study revealed that Mathematics was the most important of the two subjects for Business Studies students. Students with Higher Level Mathematics had a higher completion rate than students with Ordinary level Mathematics. This is not the case for Higher Level English.

Students can study one, two or three Business Studies subjects in their LCE. Of the three, Accounting was shown to be the most beneficial subject to study at second level. It provided advantages in studying the subject at third level. In addition students who had attempted the subject produced a higher overall average across the bundle of subjects than their counterparts who had not attempted the subject in their LCE.

Other factors which did not show any apparent relationship in academic performance included social classification of students and choice of course.

Of overriding importance to the Business Studies student was commitment to the course. This revealed itself in attendance at lectures and discipline in studying outside of class times and the Institute.

This chapter has concluded that the successful Business Student who completes the four year course emerges from all points ranges. However, the proportion of successful students increases as the points range increases. A similar view can be expressed regarding Ordinary Level and Higher Level Mathematics with students of higher level appearing to have an advantage. With regard to the three Business Studies subjects of Accounting, Business Organisation and Economics in the LCE, Accounting appears to provide most advantages for the third level Business Studies student.

Other characteristics of the successful Business Studies student include commitment to study. This reveals itself in various ways such as consistent attendance at lecturers, attention to homework and not allowing a mountain of unsolved study problems build up.

The chapter has raised questions about the importance of LCE English as a mandatory subject. It also questions the benefit of Business Organisation as a preparation for the study of Business Studies at third level. These questions are addressed in this chapter and the previous chapter.

The two foregoing chapters, research findings and analysis of findings has enabled the researcher to summarise the principal findings, present the limitations of the study and provide suggestions for further research. These are presented in the final chapter which follows.

CHAPTER VII

CONCLUSION

Introduction

This investigation saw a gap in the research literature as virtually no research had been undertaken on Business Studies students in Ireland, Murray (1998) p. 48). This study hopes to remedy this deficiency. The present chapter summarises the principal findings of the research. The chapter does so on the basis of quantitative data in respect of over two hundred Business Studies students. In addition it used qualitative research in case studies and interviews with over one hundred Business Studies students from the third level education sectors on both sides of the binary system of higher education in Ireland.

Previous research studies relating entry qualifications with third level performance reveal three critical weaknesses when comparing their findings with this study:

(1) Total dependence of the studies entirely on quantitative information and methodologies;

(2) Absence of the use of Case Studies or Interviews in attempting to ascertain findings;

(3) Studies aggregating disciplines in higher education not concentrating on Business Studies.

The study began by setting out a number of research questions in respect of business studies students which it attempted to investigate **(p. 9).** The conclusions will be presented under eight principal headings.

7.1 Firstly, the question of entry points and achievement will be addressed.

7.2 Secondly, the importance if any of the mandatory subjects of Mathematics and English for third level Business Studies students will be presented.

7.3 Thirdly, some explanations given by students for better academic performance in third level than in second level and the reverse situation

where students had poorer academic performance in third level than in second

level will be reported.

7.4 Fourthly, the benefits if any of studying one or more of the LCE Business Studies subjects Accounting, Business Organisation or Economics will be presented.

7.5 .Fifthly, first year academic performance and its predictor of subsequent third level performance will be summarised.

7.6 Sixthly, the influence of choice, social status and school attended will be given.

7.7 Seventhly, a synthesis of the findings will be presented.

7.8 Finally, the eight section to the chapter will give the limitations and suggestions for further research in the area will be addressed.

7.1 Entry Points

The study found that there was a positive but not perfect correlation between an individuals overall academic performance at the LCE and performance in Business Studies (Table 4). The predictive validity of the LCE is reasonably high. Students in the middle and high points ranges achieved better scores overall in Business Studies than students in the low points range.

The results of this study echoes the findings of the Conference of Heads of Irish Universities (1996) p. 29). The Points Commission (1998) p. 29), Moran and Crowley (1979) p. 26) found a positive but not perfect relationship between entry points earned from the LCE and academic performance in third level education. Unlike these studies, which relied upon quantitative data across a variety of disciplines, the current study found qualitative evidence in addition to quantitative data and confined itself to Business Studies. Section 7.3 in this chapter will reveal

findings in respect of students with low points range performing higher in third level and equally students with high points ranges performing poorly.
A characteristic of the system of third-level Business Studies selection in Ireland, unlike other countries such as the USA and Britain, is that applicants for a place on a Business Studies course are not asked to demonstrate a specific interest in, knowledge or understanding of, the course or courses for which they are applying. As a consequence, supply and demand for places determines the required entry points level for Business Studies courses in Institutes of Technology and Universities. High points may be generated by extremely limited numbers of places (Points Commission 1999) p. 29). The stakeholders in Irish Education are supportive of the Points system because of its transparency, impartiality and efficiency.

With regard to the retention rate of students completing the four years leading to the BBS Degree, it was found that students in the higher points range had higher retention rates than students in the lower points range (Table 2).

7.2 Essential subject requirements for entry to the course

Mathematics and English or Irish are essential subject requirements for entry to the Business Studies course. Students who dropped out early in the course and did not attempt first year examinations had ordinary level Mathematics with only one exception who had a higher D (Table 7).

Students who completed first year who had achieved higher level Mathematics performed better overall than students with lower level Mathematics in upper merit and distinction categories. In second year this trend was reversed in respect of students in lower points range whereby students with ordinary level Mathematics performed better (Table 5). Three quarters of the students with higher level

Mathematics elected to study Accounting in second year whereas the comparable figure for students with Ordinary Level Mathematics was only slightly over one quarter.

Students with Higher Mathematics in the middle to higher points ranges had a higher retention rate that students with Ordinary Level Mathematics (Table 5).

There was a positive correlation r=530 between LCE Mathematics achievement and achievement in Mathematics and Statistics in first year (Table 8). The results of this study reflects previous research by McGrath (1996) p. 28), and Healy, Carpenter and Lynch (1999) p.40,41). Students with Ordinary Level English achieved higher mean scores in their first year examination overall results than their counterparts with Higher Level English. This difference increased as the points range increased. The drop out rate is higher among students with higher level English (Table 6).

7.3 Students with low entry points achieving high academic performance at third level and students with higher entry points achieving low academic performance

This section addresses issues pertinent to an under researched area in education, that is the performance of students with higher entry points from their LCE achievement compared to students with lower entry points from the same examination. Empirical work, based on case studies and semi-structured interviews was conducted with a number of Business Studies students having completed first and second year of the NCBS and students who have left the course after one year. These students provided some of the data described in the findings chapter. The results of this research show that some high achievers did not have high LCE points, in relative

terms when they entered the Business Studies course. However, some students who entered with high points were not subsequently high achievers in the Business Studies discipline (Table 24). The findings shares Buckley (1977) p. 25) conclusion that the LCE cannot measure student motivation and other social and psychological factors that influence third level academic performance.

Findings reveal that students with low performance in their LCE, achieve higher performance in third level Business Studies for particular reasons including: (Section 2 and Section 3 Chapter 5).

Ensuring that all lectures are attended
Interest in subjects at third level in comparison to the mandatory subjects in the LCE.
The freedom that third level provides that is not the culture in second level studies.
Third level studies suits some students better than others and motivates their studies.
Working harder at studies than in second level.

Students with high performance levels in their LCE, achieve lower performance in third level Business Studies for reasons including:
(Section 2 and Section 3 Chapter 5).

Absence from lectures and carelessness in attending.
The particular subjects selected at LCE,
such as excluding Accounting from their studies.
Part time employment.
Lack of commitment to studies and the course being pursued.
Lack of policing of studies by parents that was available at second level.

Not putting in sufficient studies.

The study revealed that studying particular Business Studies subjects in the LCE influenced achievement:
(Section 2 and Section 3 Chapter 5).

Studying Accounting provides a big advantage in studying
first year third level Accounting.
Studying Economics also an advantage.

The section that follows deals more comprehensively with Business Studies subjects in the LCE.

7.4 Benefits if any of studying Business Studies subjects in the Leaving Certificate

Students who attempted Accounting in their LCE achieved higher overall performance in first year that students who had not attempted the subject. This trend do not continue after first year (Table 9).

The different retention rates between students who had LCE Accounting and who had not attempted the subject in their LCE were only marginal.

Regarding the sample the mean was significantly higher in the subject Accounting for those who attempted Accounting in their LCE than those who had not attempted the subject (Table 12, Figures 4 and 5). On average students scored 17.91 more in their academic performance in Accounting than those without the subject in their LCE. The 95% Confidence interval for the mean difference was from 13.97 to 21.86.

A comparison is made between students who attempted Economics in their LCE and students who did not in relation to their academic performance in Economics in first year Business Studies. Regarding the sample the mean was significantly higher for those who attempted Economics in their LCE than those who had not attempted the subject. On average students scored 5.21 more in their academic performance in Economics than those without the subject in their LCE. The 95% confidence interval for the mean difference was from .72 to 9.69.

There is no apparent trend in overall performance of students who attempted Economics in their LCE compared to students who had not attempted the subject (Table 11).

Students who had attempted Business Organisation in their LCE, do not appear to have an apparent advantage over students who had not attempted the subject (Table 10).

The correlations between Business Studies subjects in LCE and overall performance in years one to four in third level are not high (Table 15).

The study also revealed that the study of Business Organisation was providing basic knowledge and was not very important when it came to studying in third level Business Studies.

It appears that good grades in Mathematics and/or Physics can compensate for lack of Accounting in the LCE . Previous studies by the Points Commission (1999) p. 29), and Association of Secondary Teachers in Ireland (1998) p. 35) suggest that bonus points should be given for subjects relevant to third level education course choice. The findings of this study would share these views for

the subject of LCE Accounting but not for the subjects of Business Organisation or Economics (Chapter 5).

7.5 First Year Academic Performance

Moran and Crowley (1979) emphasised that a student who passes first year examination has been fully accepted by the University as satisfying its own criteria. Indeed they suggest that failure to graduate is not because of pre entry assessment procedures but because of defects in the assessment system (p. 26).

This investigation shows that the higher the scores of overall academic performance in first year, the greater the chance of higher scores in subsequent years (Table 21). A student who barely passes first year or who encounters difficulty in achieving the minimum pass mark is highly unlikely to achieve a merit grade in second year to proceed to the Diploma course.

It is clear from these findings that a large number of students achieving the minimum pass mark in year one improved their academic performance in year two. The structure of the course appears to lend itself to this type of performance. Once a student obtains the minimum pass mark in year one, entry to second year is assured indeed guaranteed under the contract the student has established with the Institute. This framework then does not encourage the student in first year to work to his potential as there is no reward for performance above the minimum. In second year it has been noted that a student cannot progress to the third year Diploma courses unless the minimum of 55 marks is obtained. Indeed 55 marks do not guarantee a place in the Diploma programmes in the Institute or any other Institute. This arises when there are more applicants for a Diploma course than places available on the courses in any particular Institute. Therefore second year is structured to encourage students potential and first year is not, (Chapter 2) appears to be clear from the findings in this research.

A possible solution could be to average the marks over the two years of the course in making awards at the end of year two. However, this would have to be carefully evaluated as it may also have side effects for students who could be deemed to be slow starters in year one Business Studies.

Elective in Year One. Out of the four electives of French, German, Italian and Communications most students selected Communications. This subject accounted for one third of the students in this study. 36% of students who studied communications achieved the minimum pass mark compared to about 22% for French and German. The number of students selecting Italian was too small to draw any conclusions of significance.

Number of Honours. For the purposes of this study an honour was defined as Grades A, B or C. Most students, nearly three quarters had either 3 honours or four honours. Nearly half of the students failing or absenting from year one had four honours in their LCE . Students with two to six honours were in the pass and merit one and merit ranges in year one. In year two the biggest proportion of students obtaining 55 to 69 marks merit range had four honours. However, students with 2, 3, 4, 5, or 6 honours scored in all ranges i.e. pass, merit and distinction. Most of the students who failed had three honours.

7.6 Choice, Social Status and Secondary School Attended

Four out of every five students in the study had put the Business Studies course as their first choice on their Central Applications Application form (Table 16).

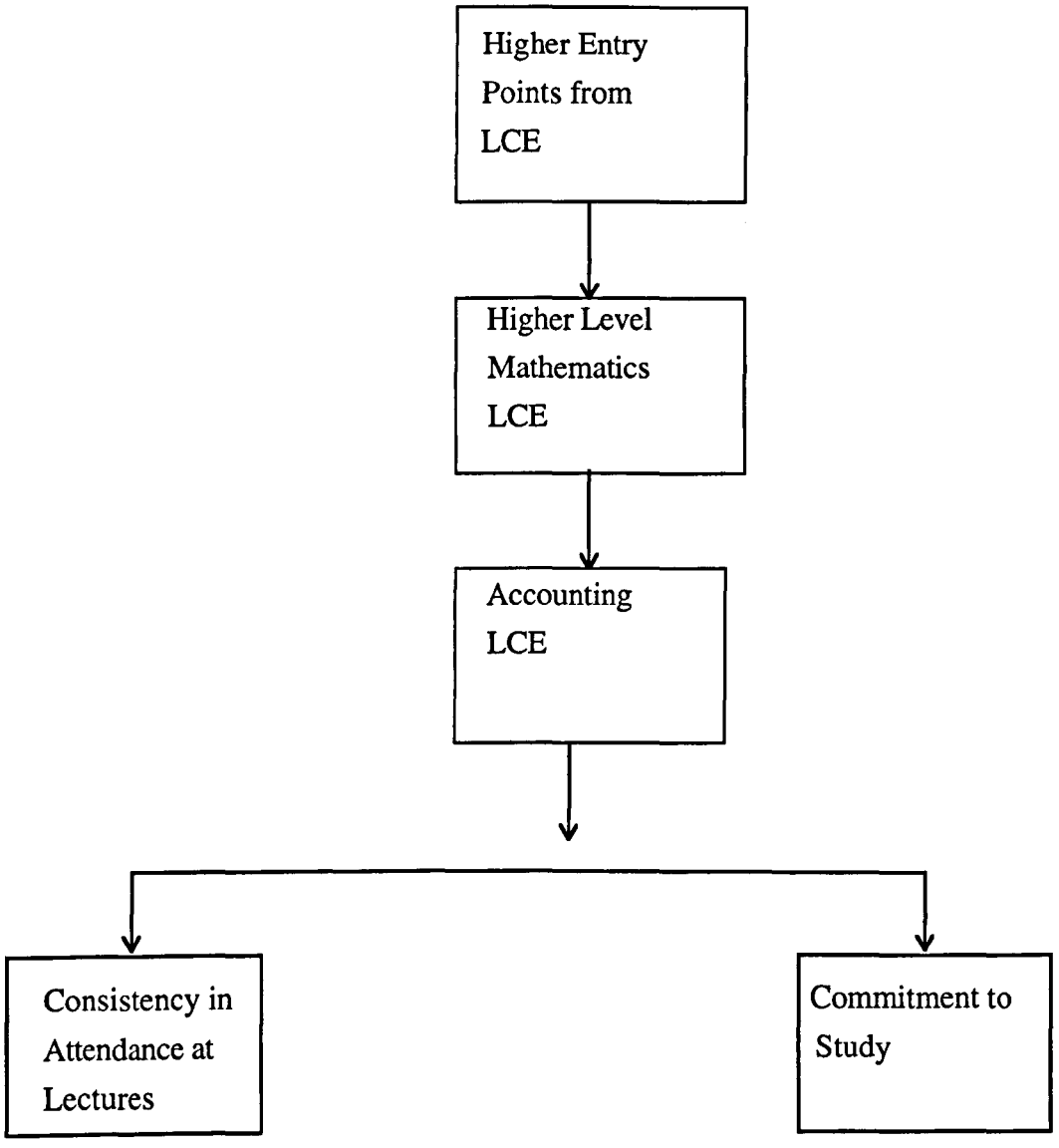
The correlations between course choice and overall performance in third level Business Studies were negative (Table 17).

A bigger proportion of students who entered from Secondary Schools completed the BBS than students who entered from Community type Schools (Table 19), although the correlation between school type and overall academic performance was negative.

There was no apparent trend between course completion/retention and social status of students (Table 20). This finding agrees with research undertaken by Buckley (1977) p. 25) where the findings showed that there was a poor relationship between pass rate and social classification.

7.7 Synthesis of successful Business Studies students

FIGURE 10



(Chapter 5 Findings)

Finally this research reveals five characteristics illustrated in figure 10 of the successful Business Studies student.

- Firstly students with higher points in their LCE are inclined to have higher overall scores in first and subsequent years in third level. In this study entry points were categorised into low, medium and high. Students with medium points performed better than their counterparts with low points and students with high points performed better than their counterparts with medium points (Table 2).

- Secondly, students with higher level Mathematics in the LCE had higher academic performance in first year third level Business Studies (Table 5). In addition the mandatory subject of Mathematics and Statistics in first year produced higher scores in the subject for students who had Higher Level Mathematics in their LCE. Another factor was that students with Higher Level Mathematics in higher points ranges had a greater retention rate (Table 5).

- A third characteristic of the successful students was that he or she had attempted Accounting in their LCE. Students with this subject achieves higher scores in first year in particular (Table 9). Students with the subject also achieve higher scores in the mandatory subject of Accounting in first year (Table 12).

- Fourthly, the study revealed that students who attended their lectures consistently were able to manage their studies better. It appears there is very little substitute to attending lectures and receiving first hand information from the lecturer as a result. The inherent discipline in attending and paying attention to subject matter covered at lectures is very important to success. (Section 2 and Section 3 Chapter 5).

- A fifth characteristic of the successful students was commitment to studies. This included continuous input to homework throughout the academic year, not just coming up to year end examinations. (Section 2 and Section 3 Chapter 5).

This final chapter has concluded that while students with low entry points successfully complete the Business Studies course, the proportion of successful candidates increases with the increase in points ranges. Higher Mathematics and Accounting are also advantageous to students when compared to students with Ordinary Level Mathematics and no Accounting in their LCE. Student commitment to studies is of vital importance to students with low entry points or high entry points. (Section 2 and Section 3 Chapter 5).

To conclude: it is hoped the findings revealed in this research influence decisions of educational stakeholders including students, career counsellors, academics, parents, school managements and curriculum planners. A more effective Business Studies course can be planned, having learned from the analysis of entry qualifications and achievement conducted in this study, and thus the study can be shown to be worthwhile

7.8 Limitations and Recommendations for Further Research

Limitations

The confidentiality of student records by the various Institutes of Higher Education would not allow the researcher access to a wider range of data in respect of an individual students LCE results and end of year examination results at third level.

This researcher shares the findings of the Points Commission (1999) which was funded by the Department of Education that not one higher education institution they contacted in respect of their study believed it was feasible to conduct a major study of the relationship between entry points in LCE achievement and subsequent academic third level performance (p. 29).

Recommendations for further research

As Institutes of Technology are relatively new in the context of Higher Institutions of Education in Ireland, research in this area is relatively scarce in Ireland, compared with the United States. The nature of the present study signifies the need for further studies in this developing and changing area in Irish second and third level education. In particular the following topics could be considered as subjects of further research:

1. Reasons for attrition in third level Business Studies courses?
2. Students comparison of their second and third level Business Studies experiences?

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APPENDICES

APPENDIX 1

Student Progression

APPENDIX 11

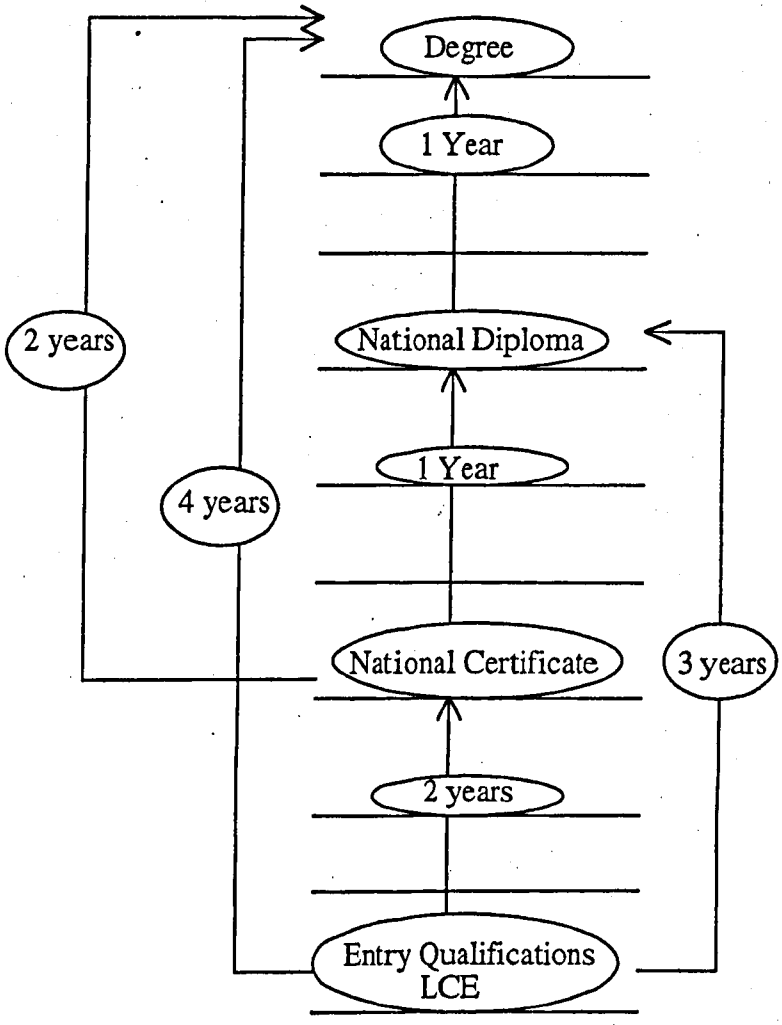
Letter from Professor of Business Studies, Dublin University, Trinity College, Dublin

APPENDIX 1

LADDER OF PROGRESSION

APPENDIX 1

LADDER OF PROGRESSION



APPENDIX 2

Letter from Head of Business Studies

Dublin University TCD

UNIVERSITY OF DUBLIN

SCHOOL OF BUSINESS STUDIES,
TRINITY COLLEGE, DUBLIN 2.
TELEPHONE (353-1) 608 2707 / 608 2338 / 608 1027
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Mr Tom J Rigney
Head of Department
Department of Business Studies
Cork Institute of Technology
Cork

1st September 1998

Dear Mr Rigney

Mr Joseph Kirwan, Admissions Officer has passed to me your letter of 24th August.

I am not aware of any study investigating the correlation of Leaving Certificate BO grades and performance in third level Business Studies courses. The one correlation which seems to have shown up over the years is between Mathematics at Leaving Certificate and general first year higher education performance.

Yours sincerely

John A Murray
Professor of Business Studies
Head of School

Copy Mr. Joseph P Kirwin, Admissions Officer.