

**SUCCESS, FAILURE AND DROP-OUT AT UNIVERSITY :  
A COMPARATIVE, LONGITUDINAL STUDY  
WITH SPECIAL REFERENCE TO  
THE UNIVERSITY OF DURBAN-WESTVILLE**


by

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*I dedicate this work to my father the  
late Kistna Gounden as a tribute to  
his profound faith in formal education  
of which he had none.*

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## CHAPTER ONE

### THE NATURE AND SIGNIFICANCE OF THE PROBLEM OF SUCCESS, FAILURE AND DROP-OUT AT UNIVERSITY AND THE OBJECTIVES OF THE PRESENT INVESTIGATION

#### 1.1 INTRODUCTION

It has become a world trend that the opportunity for university education should be made available to all. The twentieth century witnessed the partial demolition of the barrier that retained higher education as the privilege of the élite group. Attendance at a university is seen today as the gateway to the membership of a profession, and to all the benefits of improved economic and social status.

Rapid economic and industrial development in South Africa and overseas in the second half of this century has caused a general shortage of scientific manpower. Malherbe (1977, 496) stresses that full opportunities for developing the talent of every individual are no longer an idealistic aim but an economic necessity. The Wiehahn Commission (1980, 12), appointed by the South African Government to inquire into labour legislation and labour systems in South Africa, reported that a serious shortage of skilled manpower for professional, managerial and technical positions still exists. The universities, now having a major responsibility in the preparation of such personnel, have assumed greater significance as far as the public and private sectors are concerned. Educated people are a part of the nation's best human resources, and because education is one of the chief assets of the individual, there is a compelling need for research to improve the academic performance of students at all levels, especially at university.

Arising from the shortage of skilled manpower and the increasingly growing demand for tertiary education, more students enter universities. The rapid

increase in university enrolment has brought with it new interest and concern relating to those students who fail or drop out.

The problems of failure and drop-out at university have been the subject of many investigations in Western countries, especially Great Britain (Miller, 1970; Butcher and Rudd, 1972) and the United States of America (Pervin *et al*, 1965; Astin, 1971). In South Africa, the Government appointed a Commission of Inquiry into White universities (Van Wyk de Vries, 1974). Included in its terms of reference were: transition from school to university, and the high failure rate among undergraduates. As Astin (1975, 1) points out, most studies take the view that decision-makers legitimately want to know more about how to increase the students' chances of graduating. This concern is based, *inter alia*, on: loss of talent; waste of limited educational resources; vocational and personal setbacks resulting from the student's impeded career development; futile expenditure of money, time and effort.

The incidence of failure and drop-out evokes painful responses not only from the student but also from others, including his parents and his university. To parents, the admission to university of their son or daughter often represents a fulfilled ambition and the fruition of years of struggle and hope. Therefore failure or drop-out by the student is also a shattering experience for most parents - many of whom feel that they have failed as parents.

Pervin *et al* (1966, 245) point out that the reasons for dropping out, or the failure to utilize talent, can be found not only in the student himself but also in the conflicting interests of the student on the one hand, and the university on the other. According to Miller (1970, 226), research into wastage at universities must concern itself with two main aspects:

- (a) student variables; and
- (b) institutional and departmental variables.



The Robbins Report (1963) on higher education in Great Britain recommended that the investigation of the problem of wastage should be a part of the University's responsibility towards its students. Failure by students often implies partial failure on the part of the universities, as failure negates some of the main aims of the universities. According to Miller (1970, 252) academic wastage cannot be considered realistically as a problem which is separate from the goals and practices of universities: it is tied up inseparably with the institutions and their aims, and the personalities, policies, goals and criteria of those who work within them.

## 1.2 AIMS OF HIGHER EDUCATION

Three major reports on higher education in three different continents have postulated their aims for a properly balanced system:

- (a) the 1961 Robbins Report on higher education in Great Britain;
- (b) the 1972 Carnegie Commission on higher education in the United States of America, and
- (c) the 1974 Van Wyk de Vries Report on White universities in South Africa.

The following aims were common to all three reports:

- (a) to prepare students for professions;
- (b) to enhance the personal development of the students;
- (c) to advance learning;
- (d) to transmit culture and common standards of citizenship.

While some countries have economic emphases in their aims and others sociological, all agree that the university in both its teaching and research roles, is concerned with the development of the individual student as a person and with the needs of the society which sustains the university. It is clear, therefore, that the university serves a vital function in society. When students fail to complete their studies, they constitute a major problem for all concerned.



### 1.3 NATURE AND SIGNIFICANCE OF THE PROBLEM

Universities admit students with the object of preparing them for graduation. Therefore, universities must accept some responsibility if students fail or drop out. In some Western countries wastage figures for students who leave without obtaining the degree or diploma they had enrolled for are high. A similar situation exists in South Africa as the wastage figures below demonstrate:

- (a) Great Britain - 13,3% (Bligh, 1978, 81)
- (b) United States of America - 40,0% (Knoell, 1966, 66)
- (c) South Africa (White universities) - 33,3% (Erens and Louw, 1978, 52).

An aggravating factor is that universities are admitting an increasingly higher proportion of academically gifted students who also fail in large numbers (Pervin *et al*, 1966, 19; Erens, 1977, 4). Neither universities nor students are realising their full potential. The problem lies in identifying student variables and institutional variables that contribute to academic success or wastage.

In 1975 an organisation concerned with university teaching on a world-wide basis, was founded at Maryland University College in the United States of America. It has since held annually, international conferences on "Improving University Teaching" in various West European countries. At the 1979 Conference held in London two of the four major issues discussed were the purpose and goal of higher education in a changing society; and the evolution of higher education systems. At the 1980 Conference in Lausanne, Switzerland, one major issue debated was "University teaching and the student's biography." The conference was critical of the common practice of discussing the problems of students and universities in terms of separate problems, e.g., student numbers are increasing but resources are diminishing; knowledge to be acquired is increasing but student motivation is decreasing. What was

lacking was a solution in which seemingly independent problems relating to students and institutions could be identified and integrated.

At the same conference Perlberg and Israeli (1980,303) emphasized that much greater accuracy in predicting academic achievement at university was necessary. Otherwise, far-reaching implications could arise for the student the institution and society. For the student the possibility exists that inadequate selection procedures will deny him a place at university especially if competition for admission restricts enrolment; or, if prediction criteria are inadequate, then the student, although admitted to a university, may experience academic failure resulting in prolonged study or drop-out. For the institution and for society, defects in the policy and procedure of selecting students or predicting the academic achievement of those selected, result in academic wastage. The acute awareness of these problems has grown with the rapid expansion of higher education the world over, especially after World War II. The growth of egalitarian concepts has not only contributed to the expansion in student numbers at university but also increased the heterogeneity of the student body. As a result, the problems facing universities have increased in number and complexity.

The student revolts of the 1960's and 1970's in Europe and those in the United States of America in particular, have acted as agents for change in some spheres of the university. Student demands included academic freedom, relevant courses and curricula, and participation in administrative and academic bodies of the university. Students were successful in their demands at many universities where they became jointly responsible for decision-making.

Research at White universities in South Africa has produced data on drop-out rates which are alarmingly high, although they have improved from 44% for the period 1955-1961 to 33,3% for the period 1969-1975 (Erens and Louw, 1978, 56). Although data on drop-out rates at the non-White



universities in South Africa are not available, they are expected to be much higher (van der Ross, 1978, 78; Penny, 1979, 237).

#### 1.4 BACKGROUND TO THE INVESTIGATION

In the last twenty years, the number of universities in South Africa has grown from 9 to 17 with the enrolment increasing from under 4 200 to over 140 000. This increase both in the number of universities and of students has been accompanied by a greater awareness of the problem of success, failure and drop-out at university level. However, investigations into the problem of success, failure and drop-out have been more pronounced at White universities than at non-White universities. For White universities, research has been undertaken mainly by the Committee of University Principals (to be referred to henceforth as CUP). The CUP comprises the Principals of White South African Universities and the University of South Africa. It is a statutory body whose function it is to consider and make recommendations to the Minister of National Education on matters of common interest to the universities.

At a National symposium organised by the CUP in 1978 on the theme "Transition from School to University" a number of prominent educationists and authorities commented on the problem of failure and drop-out at university. The chairman of the Universities Advisory Council, Thom (1978, 8), stressed that while universities will always experience failure, they must, however, keep the failure rates within bounds. The chairman of the CUP, Henderson (1978, 1), pointed out that it had not been established conclusively whether the factors responsible for failure and drop-out lay with the student or the university or some other agent. He believed that if the university was proved responsible for the high drop-out rate, then it would take considerable investigation and analysis to identify the contributing factors.

Although the 1978 CUP symposium discussed and debated academic issues at White universities, one prominent educationist reminded the delegates that



non-White universities also required urgent attention. The situation at these universities was aggravated by the fact that non-White students come from socio-economic and cultural backgrounds that differed from those of the White university students. Therefore, he continued, a relevant approach would be to investigate the total set-up for tertiary education for all race groups instead of considering the needs of White students only. Future research and debate should concern itself not only with the White university students but also with all university students: White, Brown and Black (Viljoen, 1978, 32). He further appealed to universities to encourage post-graduate students to select for their masters dissertations and doctoral theses, problems in areas discussed at the symposium rather than some "abstract topic of little practical value" (Viljoen, 1978, 234).

Researchers and educationists in South Africa and overseas agree that research at individual universities is necessary as a sound basis for the formulation of future policy for each university:

- (a) In a review of research studies on success, failure and drop-out at university in Great Britain, Australia and New Zealand, Miller (1970, 250) concluded that research findings in other countries have limited application potential in local educational policies. Local studies are needed to guide the policies of particular institutions.
- (b) Behr and MacMillan (1966, 29) reported a substantial amount of variation in the proportion of failures not only between universities but also between Faculties in the same university. As a result, prediction formulae derived from one student population cannot be applied to another without loss of precision.
- (c) Arising from an extensive review of the literature on success and failure at universities in the United States of America, Bloom and Peters (1961, 38) concluded that predictive techniques should be developed on an institutional or a departmental basis.

The University of Durban-Westville, established in 1961 to cater specifically for Indian students in South Africa, grew rapidly with an initial enrolment of 111 students in 1961 to 4 201 in 1978. However, the university soon found itself facing problems of failure and drop-out similar to those at the White universities:

- (a) D. Behr (1969) analysed the graduation data of new enrolments at the University of Durban-Westville and expressed considerable concern over students' academic performances.
- (b) S.P. Olivier (Rector of the University of Durban-Westville up to 1981), addressed the academic staff in 1977, and again in 1978 on the problem of high failure rate at the university, which, he said, posed a serious problem to the institution.
- (c) J.C. Greyling, formerly of the Institute of Social and Economic Research of the University of Durban-Westville, and now Rector of the University, published a survey entitled "Employment Opportunities for University Trained Indians." Among the findings was the fact of high failure and drop-out rates that he described as "intolerable." He advocated in-depth studies of achievement of students at the level of individual Faculties and individual courses in relation to factors such as performance during the year, absence from lectures, matriculation results and results of aptitude tests. He hoped that the identification of the variables contributing to academic wastage would lead to the implementation of effective counter-measures (Greyling, 1977, 131).

It is clear, therefore, that there is an urgent need at the University of Durban-Westville for research into success, failure and drop-out among the students. In a previous research, the writer had made a prediction study of factors affecting academic achievement among first-year students in the Faculty of Education at the University (Gounden, 1977). The research findings of that study acted as motivation for the present study which not



only includes all Faculties but also makes comparisons with findings on the same problem at certain other universities.

### 1.5 OBJECTIVES OF THE PRESENT RESEARCH

According to Sanford (1962, 24) the field of higher education is controversial and frustrating. As a result the people involved find it difficult to handle the problems without recrimination. The Faculty blames the students, their families and the university administration. The university administration blames the Faculty and the students. The students blame their ill luck. The public, when it is interested, seems just as likely to blame one of these groups as any other. Therefore, a scientific approach to higher education can bring a much needed objectivity, and lead to appropriate attention to the causes of the problems.

The main objectives of the present investigation are:

- (a) the provision of a data base for the present investigation and for any subsequent research on topics related to success, drop-out and failure at the University of Durban-Westville;
- (b) the computation and study of pass rates (passing or failing first year) and success rates (graduating or dropping out) at the University of Durban-Westville in order to determine the true nature of the problem of success, failure and drop-out at the university;
- (c) an intensive longitudinal study - over a period of time - of the academic progress of students enrolling at the University, in order to identify student and institutional variables that predict:
  - (i) success or failure in the first year and
  - (ii) graduation or drop-out from the university;
- (d) a comparison of the findings at this university with those of certain other universities, so that the University of Durban-Westville could view its own data within a broader context.



Comparisons of academic performance with those of White residential universities in South Africa were regarded as being particularly relevant because, as Penny (1979, 140) says, while the emphasis in non-White universities has changed from a state of inferiority to one of separate but equal, the academic "gold standard remains that of the White universities."

The principal findings of this research will be addressed to decision-makers who have vital interests in success, failure and drop-out at university level. The decision-makers fall into numerous categories: administrative and academic staff at university whose decisions affect students in various ways; educational planners and policy-makers at local and national levels; student counsellors both at high school and university; and prospective students and their parents. Other groups who will be interested are social scientists and educational researchers.

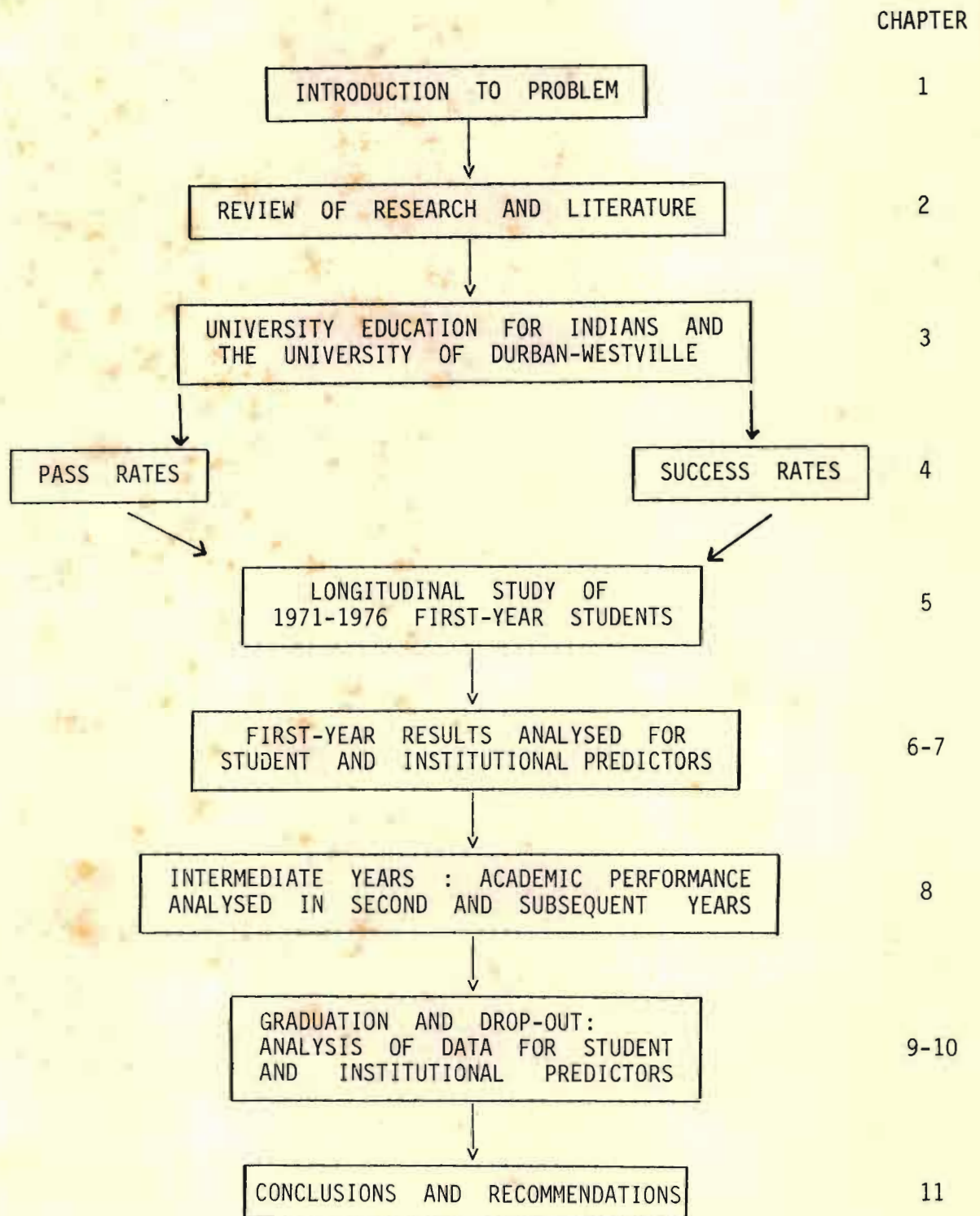
#### 1.6 ASSUMPTIONS

The present investigation is based on the assumption that there are no significant differences

- (a) in the range of academic capability and achievement of students entering the University of Durban-Westville from year to year,
- (b) in the reliability and the validity of the matriculation examinations from year to year,
- (c) in the reliability and validity of the examinations of the University of Durban-Westville from year to year and
- (d) in the standards of assessment at the University of Durban-Westville and the White residential universities in South Africa.

## 1.7 CHAPTER ORGANISATION OF PRESENT RESEARCH

The sequential development of this investigation is illustrated by the following flow diagram.





Chapter Two reviews selected research studies as well as research designs and methodology pertaining to success, failure and drop-out at certain overseas universities and in South Africa. Appropriate designs and methodology are selected for the present investigation.

Chapter Three describes university education facilities for Indians and the distribution of Indian students at South African universities. A study is made of the University of Durban-Westville with regard to student enrolment, staffing and academic awards, and comparisons are made with White residential universities in South Africa.

Chapter Four deals with the calculations and discussions of pass rates and success rates at the University of Durban-Westville and comparisons are made with other universities. Pass rates apply to students passing (or failing) first year. Success rates apply to students who succeed in obtaining a degree, diploma or certificate they had enrolled for, i.e., graduates - as opposed to drop-outs.

Chapter Five describes the commencement of the longitudinal study. Academic and non-academic characteristics of students selected for intensive study are analysed. The first-year students selected are those of the years 1971-1976. Details are provided on the collection, collation and computerisation of data, and the analyses with relation to a number of variables.

Chapter Six analyses the first-year results of the 1971-1976 students. Results are examined on the basis of subjects, Faculties, degrees, diplomas and other variables. Duly Performed Certificates are also taken into account.

Chapter Seven attempts to identify relationships between certain academic and non-academic factors of students on the one hand and passing or failing first-year on the other. In other words, predictors of success in the first year are identified.

Chapter Eight analyses the graduates from the 1971-1976 first-year students with regard to their distribution, time taken to complete first year, second year, majors, and, *inter alia*, number of years taken to graduate.

Chapter Nine analyses the drop-outs among the students from the 1971-1976 first-year enrolments with regard to, *inter alia*, their distribution, year of drop-out, sex, full-time or part-time, year, and the Faculty concerned.

Chapter Ten analyses the relationships between academic and non-academic variables on the one hand and graduating or dropping out on the other, i.e., predictors of graduation are identified.

Chapter Eleven presents the main findings of this investigation and offers considered recommendations.

## 1.8 SUMMARY

Universities in South Africa and overseas are accepting increasing responsibility for the academic performance of their students. This is only logical because it is success among students - not failure - that is accepted as evidence that universities are attaining their prime objectives. Drop-out rates at White universities in South Africa are high - 33,3%; and it is conjectured that the figures for non-White universities could be even higher. The Committee of University Principals has been conducting research on success, drop-out and failure at White universities in this country but little has been done at universities for other race groups. Researchers, educationists and writers agree that research at individual universities is necessary to formulate future policy for each university. At the University of Durban-Westville concern has repeatedly been expressed about the poor performance of students in examinations. It is the intention of the writer to make as detailed a study as possible of success, drop-out and failure at the University of Durban-Westville and to compare the findings reached with those at other universities in the country.



## CHAPTER TWO

### REVIEW OF RESEARCH

In this chapter a study is undertaken of:

- (a) research into universities by universities and State educational authorities,
- (b) research into success, failure and drop-out at university level and
- (c) research designs and methodology employed for investigating success, failure and drop-out at university level. The review covers South Africa and selected overseas countries.

#### 2.1 RESEARCH INTO UNIVERSITIES

Universities are remarkably conservative. According to Hatch (1972, 231), unlike most other large institutions, universities carry out little evaluation of their own procedures, partly because it would be too difficult to agree on the criteria to be adopted. In the past, universities operated internally on the principle of *laissez-faire*. In particular, this had meant that each department went its own way, and no one else in the university was accepted as competent to criticize the department in its field. A professor's classroom was his castle and few had the temerity to question what went on inside (Gaff, 1975, 91). Teaching methods, curricula and examinations were all too easily taken for granted, often seemingly having a large non-rational, ritual component.

In the past, poor selection procedures and inadequate preparation at school were blamed for student failure. This shifted the blame from the university to something external and antecedent. Today, universities have accepted some responsibility for student failure and have instituted experiment and investigation.

Among the most significant recent developments in higher education overseas has been the interaction between research and institutional change. This interaction has operated in both directions (Butcher and Rudd, 1972, 6). The rapid growth in higher education and the resultant changes have given rise to much more questioning of previously accepted assumptions and to a climate of opinion in which self-examination and research into the institution's own process have become more acceptable. Simultaneously recommendations arising from research findings are beginning to affect institutional policies, e.g., admission and selection procedures, counselling and assessment procedures.

The student revolts of the 1960's also assisted in accelerating the creation of centres of research in the West, more than 150 in Europe, and more than 80 in the United States of America.

### 2.1.1 Research into universities in Great Britain and the United States of America

#### 2.1.1.1 Research in Great Britain

Before 1950 British universities were open to the accusation that they did research on almost every topic but one - themselves! As from 1950, however, British higher education has been a "growth industry and research into it has been growing even more rapidly" (Butcher and Rudd, 1972, 2).

#### (a) The Robbins Report on Higher Education

The Robbins Report has served as a watershed in British higher education. It stated that the guiding principle should be that all young persons qualified by ability and attainment to pursue a full-time course in higher education should have the opportunity to do so (Robbins, 1963, 48). The report placed students into three categories:

- (i) a number of bright students who would succeed whatever the environmental disadvantages,



- (ii) another considerably larger number who, even if trained by the best teachers, would still fail and
- (iii) in between the above two there was the vast majority whose performance, both at entry to higher education and beyond, depended on how they had lived and had been taught before hand. It is for this group, in particular, that research is required in order to reduce failure and drop-out.

(b) National Research Organisations

Since the Robbins Report, research into higher education assumed even greater importance in Great Britain. The Department of Education and Science has been spending large sums of money on selected projects. The Social Science Research Council, established in 1966, has a special interest in higher education and educational research. The Society for Research into Higher Education exercises a co-ordinating influence to help rationalise research throughout Great Britain and disseminate findings from British studies and those from other countries.

(c) Research Units at Individual Universities

Individual universities have established Departments to investigate higher education e.g., the Department of Higher Education, at the University of London Institute of Education; an Education research unit at London University; a Teaching Methods Unit at the University of Exeter; a Teaching Services Department at Birmingham University; and at the University of Lancaster, an Institute of Research and Development in post-compulsory education.

2.1.1.2 Research in the United States of America

- (a) The very comprehensive American symposium "The American College" (Sanford, 1962) had as its main aim the improvement of the work of colleges and universities through a detailed study of the process of higher education in the United States of America.

- (b) The Carnegie Commission on Higher Education in the United States, was established in 1967 by the Carnegie Foundation for the Advancement of Teaching. Its function was to study and make recommendations on higher education for the 1970's and ahead to the year 2000. The Commission made an intensive study of the condition of higher education for six years during which time it issued 21 special reports and sponsored a series of special studies to aid higher education in the United States to reach new levels of achievement (Carnegie Commission, Final Report, 1973).
- (c) National and Federal Institutions Researching Higher Education Problems  
Many national bodies such as the American Council on Education, the National Institute of Education, the National Education Association, involve themselves in in-depth investigations into problems of higher education. Federal agencies, such as the Bureau of Social Science Research, the United States Bureau of Health, Education and Welfare and the United States Office of Education are actively involved in the educational needs of the nation, including research at tertiary level.
- (d) Research Centres at Universities  
Centres for research and development in higher education have been created at most major universities in the United States. The centres undertake local and national studies. The Berkeley Centre for Research and Development in Higher Education, for example, conducted investigations designed to chart the flow of university students with diverse attributes and backgrounds through the large variety of institutions and curricula one finds in the United States of America (Venables E and P, 1972, 32).

### 2.1.2 Research into Universities in South Africa

- (a) Research by the National Bureau for Education and Social Research  
The first major scientific attempt to investigate an educational



problem at university level was made by the National Bureau for Education and Social Research in 1936. It investigated the achievement of 8 000 White matriculants entering White universities in South Africa, with the objective of establishing the prognostic value of the matriculation examination for success at university.

(b) Research by the Transvaal Education Department

An investigation by the Transvaal Education Department of the results of students entering universities in 1976 showed wide variations in failure rates not only between universities but also between Faculties at the same university.

(c) Research by the Joint Matriculation Board

Because of the increasing evidence reflecting adversely on the selective and predictive value of the matriculation examinations for university study, the Joint Matriculation Board undertook a study of academic performance of all full-time students registered for the first time in the years 1954 to 1957 at the eight White residential universities in South Africa (Steyn, 1963).

(d) Research by the Commission of Inquiry into White Universities

In 1968 the South African Government appointed a Commission of Inquiry into White universities. The terms of reference of the Commission required it to "inquire into and report on the educational, academic, financial and developmental aspects of White South African universities, including the University of South Africa" and on any other matters which the Commission deemed important. The Commission's intensive inquiry included a study of the transition from school to university, the high undergraduate failure, guidance to students and tuition at university. Deep concern was expressed for the poor results obtained by university students, especially first-year students (van Wyk de Vries *et al*, 1974).

One of the findings of the van Wyk de Vries Commission was that the State had not consulted the Committee of University Principals (CUP) on matters affecting the universities, and that the functioning of the CUP had not kept pace with the rapidly changing circumstances at the universities. The Commission recommended that:

- (i) the State consult with the CUP on all matters concerning universities,
- (ii) the universities expand the CUP without delay into a dynamic and efficient body with a full-time secretariat,
- (iii) the CUP should, with the highest degree of expertise, engage in constant and systematic investigation of matters such as first-year failure rate, articulation of school with university, teacher training, graduation trends, university methods, and
- (iv) the latest data about university students be recorded in a central register. This was necessary for sustained research and a detailed analysis of student performance.

(e) Research by the Committee of University Principals (CUP)

The CUP comprises Principals of White South African Universities and the University of South Africa. It is a statutory body whose function it is to consider and make recommendations to the Minister of Education on matters of common interest to the White universities. In 1967 the CUP held its first major inter-university conference in Bloemfontein. It deliberated on academic problems at universities with special emphasis on the adjustment problems of first-year students to the university environment. Other issues discussed were: staffing, teaching methods, the student community and the possibility of future research. Following the recommendations of the van Wyk de Vries Commission, the CUP appointed a Secretariat and a research team to investigate the problem of failure, more specifically at first-year level (Erens, 1977).



In 1978 the CUP organised a national symposium to examine the various elements of the problem of student failure. The symposium was attended, *inter alia*, by representatives of all 17 White and non-White universities in South Africa.

The issues raised at the symposium included the place, role and objectives of the university; statistical facts concerning the extent of the problem of failure, and more specifically first-year failures at White South African universities; failure and drop-out in the United Kingdom (presented by a United Kingdom educationalist).

The symposium was regarded as proof of the honest endeavour of universities to discuss openly all facts of university activity. Furthermore, the publication of the proceedings indicated that the universities wanted to publicise their findings so that positive results could be achieved within the total tertiary educational sector.

(f) Tertiary Education Units at Universities

Like universities overseas, many South African universities have shown an awareness of the need to examine and improve themselves. As a result we have, *inter alia*, Bureaux for Higher education at the University of the Orange Free State and the Rand Afrikaans University, Tertiary Didactics Units at the University of Cape Town, the University of Port Elizabeth and the University of Durban-Westville; and an Educational Technology unit at the University of Witwatersrand.

The above review of research into universities is followed in the next section by a review of research specifically on success, drop-out and failure at university level.

## 2.2 RESEARCH ON SUCCESS, FAILURE AND DROP-OUT AT UNIVERSITY

"Success" is academic accomplishment resulting from passing examinations at the end of the year and thereby either gaining promotion to the next year of study or graduating. "Failure" is the inability of the student to meet the examination requirements in a subject or subjects; resulting in delayed graduation or drop-out. "Drop-outs" are students who leave the university without obtaining the degree or diploma they had enrolled for.

### 2.2.1 Research Overseas into Success, Failure and Drop-Out

Research into failure and drop-out at university, has in the past concentrated on student factors. After 1950, however, researchers have included institutional factors in their investigations (Pantages and Creedon, 1975, 49-105). Bloom and Peters (1961, 6) claim that the problem of predicting success at tertiary level has probably received more public attention than any other single educational problem. In the United States of America alone an average of 58 studies per year pertaining to prediction, selection and guidance at universities and colleges, indicated the importance attached to the problem of failure and drop-out (Fishman and Pasanella, 1962, 666). In Great Britain too there is more concern today than ever before about the performance of students at institutions of higher learning (Oxtoby, 1967, 38; Butcher and Rudd, 1972; Beard and Senior, 1980). Australian and New Zealand universities have also undertaken numerous investigations into student achievement at university (Miller, 1970, 10).

Scores from achievement tests and ability tests play decisive roles in the admission of students to university. Matriculation results or their equivalent have repeatedly been found to be the best single predictor of success (Bloom and Peters, 1961, 4; Miller, 1970, 100; Astin, 1975, 30; Beard and Senior, 1980, 70).



However, while the research studies have emphasized the importance of intellectual factors for university success, they have also revealed that factors other than academic ability are important (Lavin, 1965, 43; Miller, 1970, 29). Between 35% and 45% of variation in academic performance is accounted for by measures of ability (Daniëls, 1970, 65). The majority of studies have attempted to improve prediction through a consideration of additional factors of a non-intellectual nature (Lavin, 1965, 22; Butcher and Rudd, 1972, 159).

Non-intellectual factors that have been researched and found to influence academic achievement at university include: personality (Anthony, 1973, 223; Sumner, 1974, 87; Beard and Senior, 1980, 26); parent's education (Astin, 1970, 43; Herrenkohl, 1972, 325; Astin, 1975, 34); parent's occupation (Furneaux, 1961, 52; Sinha, 1966; Chopra, 1969, 435; Abbot, 1972, 170); chronological age (Sanders, 1963; Astin, 1975, 44); sex of student (Lavin, 1965, 52; Astin, 1971, 5); commuter time (Summerskill, 1962; Sinha, 1966); residence (Bay, 1962, 999; Hountras and Brandt, 1970, 35; Astin, 1975, 89); finance (Summerskill, 1962, 846; Miller, 1970; Worthington and Grant, 1971, 7).

Most of these non-intellectual factors are related to socio-economic status. Low socio-economic status results, *inter alia*, in inferior study facilities, over-crowded homes, rowdy neighbours, - conditions that prevail in many Indian residential areas. Students from good neighbourhoods proved to be superior in academic attainment (Sumner, 1974, 39). Students from well-educated, professional, small families achieve better results at university (Furneaux, 1961, 109; Astin, 1975, 34).

Much of the research outlined above employed correlational analyses to find predictors for success. An extensive review by Bloom and Peters (1961) of more than 40 years of research on academic prediction revealed that correlation coefficients ranging from 0,40 to 0,60 can be expected when

matriculation results, aptitude test scores and achievement test scores are correlated individually with university results. In combination, these intellectual factors yield multiple correlation coefficients varying from 0,55 to 0,65. Non-cognitive variables, used in conjunction with cognitive variables, have therefore increased the prediction correlations (Denham 1966; Marshall, 1968).

In the United States of America the drop-out problem has been singled out for in-depth study on numerous occasions. Astin (1975, 1) offers the following reasons for the intensive research into drop-outs: waste of talent, waste of limited educational opportunities, vocational and personal setbacks resulting from impeded career development, waste of time and effort, declining enrolment and finance.

According to Knoell (1966, 63) who made a study of the ontogeny of the drop-out in the United States, drop-out studies rival prediction studies in sheer numbers. Further, the drop-out problem revealed the following characteristics:

- (a) High school students enter college with a vast range of goals, interests and motivation.
- (b) Drop-out is a function of the interaction of student input and institutional input.
- (c) Some student characteristics are fixed, e.g., age, race, sex; while others are flexible, e.g., interest, motivation.
- (d) The decision to drop out is not always left to the student.
- (e) Any single factor can trigger drop-out.
- (f) Drop-outs can be differentiated as permanent or temporary.

Researchers are identifying ways to help students to graduate. Astin's longitudinal study (1975) of personal and environmental factors that maximise a student's chances of completing his university studies, revealed that high school results, degree aspirations, religious background, study habits, educational level of parents and admission test scores, all



affected the student's chances of staying on at university and completing his studies.

### 2.2.2 Research in South Africa on Success, Failure and Drop-Out

Research overseas has been extensive but in South Africa it has been sparse. However, White universities have been subjected to more investigations on academic performance than the non-White universities.

#### 2.2.2.1 Research into Success, Failure and Drop-out at White South African universities

Although only a limited amount of research into university success, drop-out and failure had been undertaken in South Africa, considerable concern about these issues has repeatedly been expressed by educationalists and researchers (Behr and MacMillan, 1966, 230; van Wyk de Vries, 1974, 233; Le Roux, 1976). Various reasons were advanced for the high under-graduate failure rate. For instance:

- (a) Van der Merwe (1973) blamed ineffective tuition, poor student selection, poor course selection, inappropriate study methods, and the inability of the lecturer to adapt to the change in his role.
- (b) Visser (1968) ascribed the high failure rate to:
  - (i) the radical differences between high school study methods and those at university,
  - (ii) personality problems and
  - (iii) immaturity among students.
- (c) Le Roux (1976) - Secretary of the Joint Matriculation Board, stated that at least 90% of the White matriculants had the necessary intellectual capacity to study at university. However, such capacity alone was not enough for success as other factors - sociological, psychological and external - also contributed.
- (d) The van Wyk de Vries Commission stated that the reasons for failure were complex. It asked the CUP to investigate, in the hope that a

solution could be found in a collection of measures covering the entire university system.

The first comprehensive investigation into student performance at university level was conducted by the National Bureau of Education and Social Research in 1936. A survey was made of 8 000 White matriculants entering all South African universities over 6 years. Correlations were made of achievement at university with matriculation results, as well as with school records. The main outcomes were the following:

- (a) 46,5% of all first-year students failed in at least one subject and 24,6% in two or more subjects.
- (b) First-class matriculants failed less frequently than others in the first year.
- (c) Those matriculants who had not repeated a standard at school fared better than those who had; not only in first year but also throughout their academic studies at university (Malherbe, 1977, 477).

In the 1950's The Transvaal Education Department studied the university records of 2 635 White first-year students who had entered six universities in 1956 after matriculating in 1955. The results revealed:

- (a) tremendous variation between how students with the same matriculation aggregates fared at different universities;
- (b) the total percentage failing also varied from 15% at one university to 38% in another;
- (c) the highest percentage of failures occurred in the Sciences, the lowest in Arts and Social Sciences;
- (d) even within the same discipline there was tremendous variation in failure rates at different universities, and even in the same institution from one year to another (Malherbe, 1977, 478).



At the request of the Joint Matriculation Board, Steyn (1963) analysed data relating to all full-time White students registered for the first time in the years 1954 to 1957 in the eight White residential universities in South Africa. His main findings follow:

- (a) Only 55% of students entering White South African universities eventually succeeded in obtaining a degree.
- (b) There was a big difference between the rates of success in the Arts (63%) and the Sciences (48%).
- (c) The correlation between matriculation standards and university standards differed from university to university and also from subject to subject at the same university.

In the early 1960's the academic problem of the high percentage of university failures was also viewed as an aggravating feature of the man-power situation - the shortage of trained man-power. The high failure rate at universities was viewed as wastage of human and economic resources. In order to assess this wastage more accurately the National Bureau of Education and Research (Pretoria) conducted an investigation in 1963 into the performance of White matriculants who entered White universities in 1962, as well as of the available teaching facilities at White South African residential universities. The Report revealed, *inter alia*, that:

- (a) 32,3% of first-year students took at least two years to pass first year and there was considerable variation from university to university;
- (b) although there were large numbers of first class matriculants (merit passes) in Science and Engineering, the failure rate was also high in those two Faculties (Malherbe, 1977, 496).

In 1966 the Transvaal Education Department conducted an experiment in which selected White schools were exempted from entering their pupils for the matriculation examination. The hypothesis tested was that students who had been taught without the external pressure of a public examination fared

better at university than those who took the matriculation examination. Twenty White high schools formed the experimental group while another twenty formed the control group which wrote the matriculation examination. The university achievement of the two groups varied considerably at different universities. At some universities the experimental group did better while in others the control group did better. At four universities there was no significant difference between the attainment of the two groups over a period of three years (Malherbe, 1977, 482).

As from 1950, research into academic achievement at university has also been conducted by individuals and university departments:

- (a) In 1954 the Psychology Department of the University of Stellenbosch obtained results similar to those of the National Bureau of Education and Research, Pretoria.
- (b) Gouws (1957) obtained a moderate correlation of 0,314 between intelligence tests and first-year university results of students at Pretoria University. In the examinations, the male students performed better than the females.
- (c) At Witwatersrand university, Reuning (1957) obtained a very low correlation of 0,02 between measured academic ability and first-year achievements of students. In his study female students did better than males.
- (d) Brandford (1961, 39), in a study of Indian students at the Medical School of the University of Natal, concluded that the matriculation examination result was the best single predictor of achievement at university. He obtained a correlation-coefficient of 0,44 and established that male students performed better than females. In his study eighteen-year olds were the most successful pre-medical students.
- (e) Orpen (1970) made a study of the influence of personality on academic achievement at the University of Cape Town and concluded that the introvert was a better student than the extrovert.



In 1974 the van Wyk de Vries Commission examined in detail the problems relating to academic achievement at the White universities and recommended that the CUP make further investigations. The CUP responded by making an immediate survey of White students who had obtained a degree, diploma or certificate from any of the White South African residential universities. An analysis of the findings revealed, *inter alia*, that:

- (a) there was strong student support for university education to be vocationally orientated,
- (b) students felt that counselling was insufficient,
- (c) Education Diploma students (post graduates) wanted less emphasis on theory and more on practice.

As a result of the increasing criticism that universities were also accountable for the failure of their students, the CUP decided in 1976 to collect information from White universities to obtain a profile of passes and failures among the 1975 first-year students. The findings were as follows:

- (a) There was very little difference between the backgrounds of successful and unsuccessful students as regards family and school.
- (b) A matriculation aggregate of less than 50% was a good predictor of failure at university.
- (c) With regard to living and social factors on campus, only one factor could be singled out as directly contributing to failure, i.e., severe emotional strain.
- (d) The vast majority of students went to university for sound reasons, i.e., serious, goal-directed study.
- (e) Unsuccessful students experienced greater difficulty than successful ones in coping with the transition from school to university, i.e., in academic requirements, workload, presentation of work, and self-discipline.

- (f) The average number of hours of regular work was considerably fewer than the 40 or more hours expected per week.
- (g) 43,5% of failing students felt a lack of purpose in their studies (Erens, 1977).

In 1978 at the CUP symposium on "The Transition from School to University," Erens and Louw (1978, 33) presented "Statistical facts concerning the extent of the problem of failure and more specifically, first-year failures at universities and the distribution of failures between different fields of study and subjects." They (Erens and Louw) attempted firstly, to put the problem of failure among White South African students at residential universities in statistical perspective, and secondly, to analyse the trends in the results of the previous 20 years in the hope of perceiving avenues that could be explored more profitably to solve the problem. Official statistics of the Department of National Education were used. The main conclusions drawn from the analyses follow:

- (a) The success rate, i.e., the percentage of first-year students who eventually graduated, had increased from 56% in 1955-1961 to 67% in 1969-1975.
- (b) There were considerable fluctuations in the success rate from year to year.
- (c) The percentage of an age group receiving a university qualification was nearly 20%.
- (d) The university system had proven potential to prepare its students for graduation.

Arising chiefly out of the complaints of inequality of educational provisions for the various non-White race groups in South Africa, the Human Sciences Research Council (HSRC), at the request of the Government, undertook in 1980 an investigation into education in South Africa. The HSRC asked the CUP to



submit a list of problem areas in education. The 11 White universities listed problem areas with short motivations on the understanding that only the first phase of their involvement in this investigation had begun. Important problems raised included the matriculation examination for university entrance, deficiencies of science undergraduate students, and university tuition (Louw, 1980). The investigation is on-going.

#### 2.2.2.2 Research into Success, Failure and Drop-Out at the University of Durban-Westville

At the University of Durban-Westville, a few attempts have been made to research student achievement:

- (a) Behr and Behr (1965) applied a series of tests to a group of first-year students in the Faculties of Arts and Science in order to determine their academic proficiency. The overall conclusion reached was that only about 15% could be expected to complete their studies in the minimum three-year period.
- (b) Four years later Behr (1969) established that of the 161 students in the 1965 study only 21% had graduated after four years.
- (c) In a man-power survey on "Employment Opportunities for University-trained Indians", Greyling (1977) analysed student enrolments and results of Indian students over the period 1964-1974. The analysis extrapolated that a sustained increase in enrolment could be expected after 1974, with the possibility of high drop-out rates. He advocated in-depth studies of student achievement to counter wastage.
- (d) Gounden (1977) made a prediction study of first-year students in the Faculty of Education for the academic year 1975. Factors that were found to contribute significantly to first-year success were high school achievement, personality (extraversion), commuter time, sex of student, finance, part-time employment and parent's education.

## 2.3 TYPE, DESIGN AND METHODOLOGY OF RESEARCH ON SUCCESS, FAILURE AND DROP-OUT AT UNIVERSITY

Research procedures must be appropriate to the objectives of a particular study. Therefore, a review was made of the scope, design and methodology of research into success, failure and drop-out at university level. This was necessary in order to obtain an efficient research design with appropriate methodology for the present research.

### 2.3.1 Scope of Research at University Level

With regard to the scope of studies in higher education, Venables E and P (1972, 19) differentiated between the following three groups:

- (a) specific to one institution, providing information which can be fed back to the working force; a feedback service intended to improve the performance of a particular group or groups of students;
- (b) inter-collegiate: comparative studies likely to generate more widely-based hypotheses than those of the first group;
- (c) a combination of specific and inter-collegiate.

Studies at single institutions should, if possible, not be placed in isolation but in relation to what is being done in other institutions so that the combined results of such efforts can be generalised for the benefit of the educational system as a whole (Venables E and P, 1972, 29).

### 2.3.2 Types of Research on Success, Failure and Drop-Out at University

In a critical review of research on the college drop-out, Knoell (1966, 64) categorised four major types of studies:

- (a) the census study which serves primarily to establish base-line data for particular institutions;
- (b) the autopsy study which attempts to identify reasons for failure and drop-out by questioning students at the time they drop out;



- (c) the case study approach, often used by those concerned with decisions about students;
- (d) prediction, in which admission variables are related to success and failure at university.

In a study of the ontogeny of the drop-out problem, Kubie (1966, 25) stressed that in order to be able to understand the problem of drop-out, one of two approaches must be adopted:

- (a) intensive comparative studies of statistically adequate representative samples of drop-outs and non-drop-outs alike or
- (b) comparison of incidence of drop-outs at different universities, or in different departments in the same university, and then to seek reasons for these differences.

### 2.3.3 Types of Designs for Studying Success, Failure and Drop-out at University

One categorisation of research designs separates them into static and longitudinal (Lavin, 1965, 45).

#### 2.3.3.1 Static Designs

Static designs measure students' performance at a particular point in time, e.g., at the end of the first year; and they relate performance to the variables selected for the study. Most of the research on academic achievement at university has employed the static design.

#### 2.3.3.2 Longitudinal Designs

The longitudinal design assesses students repeatedly at several points in time, e.g., at the end of each year that the student is at university. Astin (1975, 181), president of the Higher Education Research Institute of the United States of America, advocates the longitudinal experiment involving intakes of students over a period of time, together with a correlational study where predictor variables are correlated with performance.

The principal advantage of the longitudinal-type design is that it enables the researcher to track students from the time of enrolment to graduation or drop-out. He has a far better opportunity to gain insight into the process of university education and the profile of success, failure and drop-out (Astin, 1975, 3). The most obvious questions raised about students at the end of a course of study include: what percentage succeeds; what proportion fails; what percentage drops out; what evaluation processes are used to determine who succeeds and who fails; how much it costs (Venables E and P, 1972, 26).

Any university that chooses to do so can greatly reduce the proportion of its students who drop out, unless that proportion is small (Ford and Urban, 1966, 84). One of the first things to do is to acquire some basic data about its own individual situation. It must arrange for a steady flow of data concerning admission, academic performance and related characteristics of its students. Careful study of both graduates and drop-outs is essential. It is only by such feedback that a university can evaluate its efforts and discover those aspects of its operations which need to be improved.

In those institutions that currently have no base data, a longitudinal study will clearly take time to implement. Such studies are also costly in terms of time, labour and finance as Malleon's (1972, 85) study of student wastage at the University College, London, of four successive student intakes revealed. A longitudinal study of student achievement at university requires all students who enter university in a particular year to be tagged. Their progress is then studied from year to year until they graduate or drop out.

A procedure that is partly longitudinal is the FLOW MODEL which enables the calculation of success rates of a university or universities. The model is based on the fact that in a no-growth situation - one in which the intake of new first-year students remains constant in number - the success rate is



determined simply by dividing the number of graduates in any year by the number of new registrations. If growth occurs then a more sophisticated calculation is made. These calculations will be described and discussed in Chapter Four where the flow model will be used.

In his resumé of the 1978 CUP symposium at Pretoria, Viljoen - Rector of the Rand Afrikaans University and presently Minister of National Education - recommended that future research on success and failure should use 'success rate' as the starting point and not 'failure rate'. He urged universities to study the flow model, which uses success rate as its basis, and the longitudinal study where students' performance can be followed until they graduate or drop-out. Individual universities could determine to what extent they can use the two methods.

Although the longitudinal study is exhaustive and expensive, it is, however, a most important complement of the flow model calculations and has considerable potential for the remediation of the problems of failure and drop-out (Viljoen, 1975, 225).

#### 2.4 DESIGNS AND METHODS OF THE PRESENT STUDY

The present investigation has three important study components:

- (a) the census study,
- (b) the longitudinal study and
- (c) the comparative study.

Two census studies were undertaken, one for the flow model and the other for the longitudinal study that followed the flow model. In the first census study, student data were extracted from the records kept by the University of Durban-Westville, and collated to provide a data base for the study of pass rates of first-year students, and the success rates of graduates.

The pass rate study employed a static design while the success rate study used the flow model which is partly longitudinal.

In the second census study, data relating to students who had enrolled at the University of Durban-Westville for the first time in each year for the period 1971-1976, were collected and classified to form a data base for an intensive longitudinal study.

The longitudinal study followed each intake of first-years from 1971 to 1976, until they graduated or dropped out. This study was also predictive. Variables were identified that predicted performance at university in respect of:

- (a) passing or failing first year, and
- (b) graduating or dropping out from university.

The comparative study pervades much of the investigation. Wherever possible the findings at the University of Durban-Westville are compared with corresponding findings at White universities in South Africa and at certain overseas universities.

## 2.5 STATISTICAL METHODS EMPLOYED

The statistics used in this research are both descriptive and inferential. The descriptive statistics include tabulation and graphical representation; and the inferential, the use of  $\chi^2$ . Because the analysis of data repeatedly resulted in comparisons of frequencies, the principal statistic used was the  $\chi^2$  test for independence - a statistic recommended for use in a variety of problems involving frequencies (McNemar, 1961, 209; Lordahl, 1967, 162). Another virtue of  $\chi^2$  is that it is non-parametric, i.e., it is not based on assumptions of any particular kind of distribution in the population studied (Lordahl, 1967, 311; Downie and Heath, 1970, 196).

For further information on  $\chi^2$  see Appendix 1, p. 384, which, *inter alia*, outlines:

- (a) the nature of  $\chi^2$ ;
- (b) the requirements and formulae for  $\chi^2$



- (c) Yates' correction for continuity;
- (d) recommended procedures for computing  $\chi^2$  for degrees of freedom equal to or greater than one in special cases, e.g., small expected frequencies.

Critical values for  $\chi^2$  in this research are taken at the 5%, 1% and 0,1% levels. The symbols used will be the following:

- (a)  $p < 0,05$  will denote significance at the 5% level,
- (b)  $p < 0,01$  will denote significance at the 1% level,
- (c)  $p < 0,001$  will denote significance at the 0,1% level.

## 2.6 SUMMARY

Success, failure and drop-out at university comprise a problem that has been heavily researched overseas. Most of the investigators have used the static design where student performance is studied at a particular point in time - the most popular one being first year. Much of the research has concentrated on intellectual factors, in particular, matriculation results. Researchers who investigated the influence of non-intellectual factors on academic achievement at university have met with limited success. The new emphasis is on longitudinal studies over the entire period that the student is at university. Now that universities have accepted accountability for the success, drop-out or failure of their students, they have also undertaken research into the university educational system, including student achievement in examinations. In South Africa early research has concentrated mainly on the matriculation examination results as predictors of performance at White universities, especially in the first year. More recent investigations have been initiated by the Committee of University Principals (CUP). At the 1978 CUP Symposium on "The Transition from School to University" much emphasis was placed on the need for South African universities to employ longitudinal studies to investigate the problem of success, drop-out and failure. The writer has undertaken a longitudinal study of this

problem at the University of Durban-Westville. A pre-requisite for such an investigation is a census study to establish a data base from which firstly, pass rates and success rates can be obtained - these will be indicators of the academic condition at the university - and secondly, the longitudinal study can be pursued. Comparative assessments will be made wherever feasible throughout the research using  $\chi^2$ . This statistic is recommended for data that are distributed as in this study, i.e., in frequencies.



## CHAPTER THREE

### 3. UNIVERSITY EDUCATION FOR SOUTH AFRICAN INDIANS

When assessing the educational needs and attainments of a community at university level, important features considered would include the following:

- (a) the percentage of the population
  - (i) writing standard ten examinations,
  - (ii) obtaining matriculation exemption certificates,
  - (iii) entering university;
- (b) the percentage of an age group
  - (i) obtaining matriculation exemption certificates,
  - (ii) entering university;
- (c) the percentage of
  - (i) the population graduating from university,
  - (ii) of an age group graduating from university;
- (d) the university facilities available and their adequacy.

This chapter presents, analyses and evaluates basic data relating to:

- (a) the growth of the South African Indian population,
- (b) the increase in Indian matriculants,
- (c) university education facilities for Indians and
- (d) the growth of the University College for Indians - now the University of Durban-Westville.

#### 3.1. INDIAN POPULATION GROWTH IN SOUTH AFRICA

Data chosen for study are those pertaining to

- (a) Indian population : 1950 - 1977 and
- (b) Indian births : 1950 - 1977.

### 3.1.1. Indian Population Growth Statistics

Fig. 3.1 reflects graphically the growth of the Indian population over the period 1950 - 1977. (Population data are found in Appendix 2, p. 386).

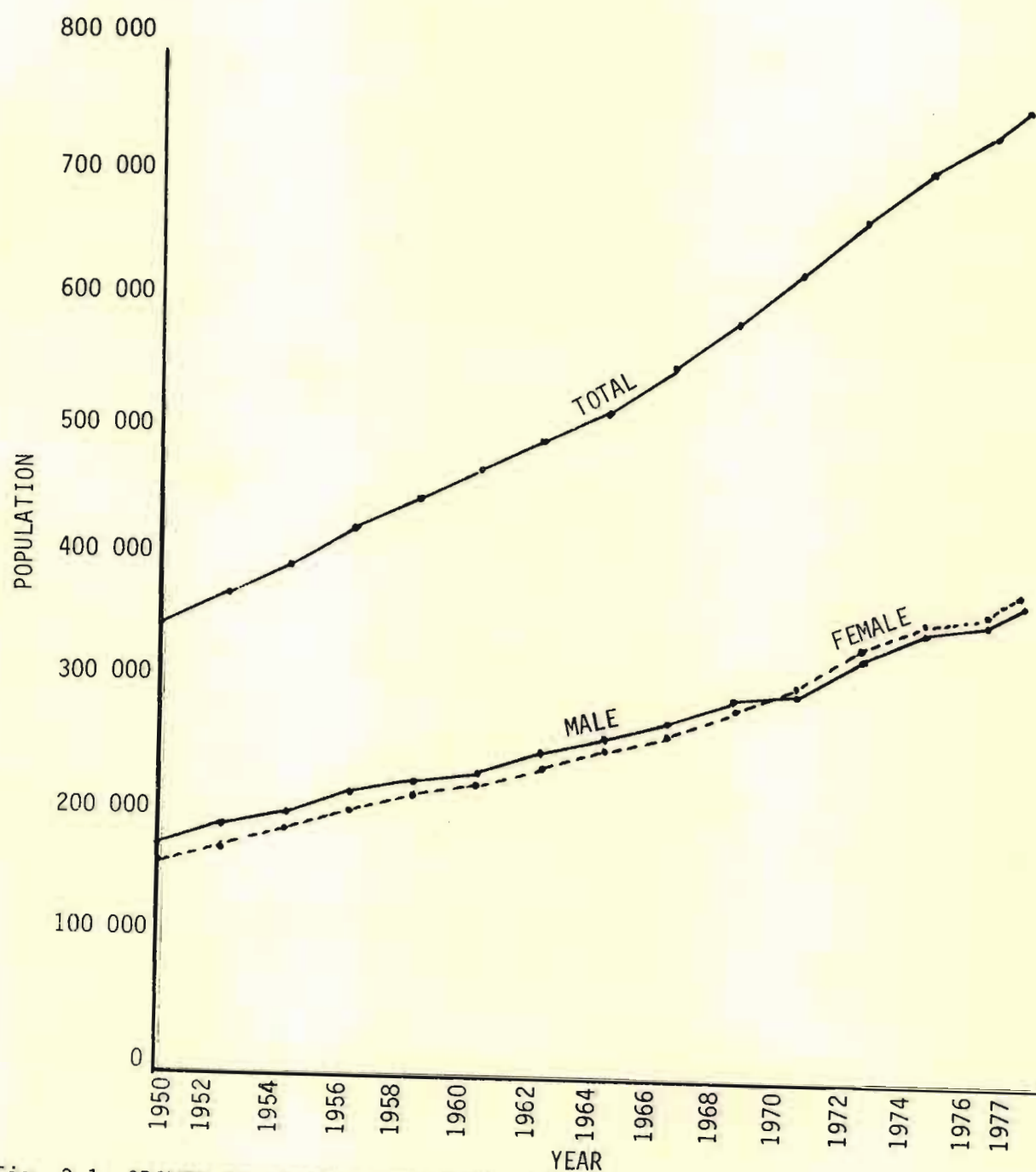


Fig. 3.1 GROWTH OF INDIAN POPULATION: MALE, FEMALE, TOTAL 1950-1977

A study of fig. 3.1. reveals the following:-

- (a) The Indian population in 1977 was more than double that of 1950. However, it must be noted that, while the population has grown steadily, there has been a decline in the growth rate from 18,8% for 1950-1955 to 13,1% for 1972-1977.
- (b) Up to 1969 the male population exceeded that of the female, but as from 1970 the females have outnumbered the males. The 1978 distribution of males and females was subjected to a  $\chi^2$  test.  $\chi^2 = 83,99$  ( $p < 0,001$ ). Therefore, the difference between the sexes was highly significant. Because population growth is determined by the birth rate, the latter will be studied next.

### 3.1.2. Indian Birth Rate

Figure 3.2 illustrates graphically the data relating to Indian births for the period 1950-1977. (Appendix 3 contains data relating to Indian births - see p. 387).

A study of figure 3.2 (p. 41) reveals the following information:

- (a) The birth rate has been increasing steadily from 1950 to 1972.
- (b) The number of births reached a maximum of 22 462 in 1972; from which data there has been a gradual decline in numbers to 18 881 in 1977.

The positive growth in the birth rate up to 1972 implies a subsequent positive growth rate in the Indian school population. Therefore, the numbers writing the standard ten examinations should increase steadily up to 1990 (eighteen years after 1972). Consequently the demand for university education should continue to increase up to 1991.

A study is now made of data relating to school and standard ten



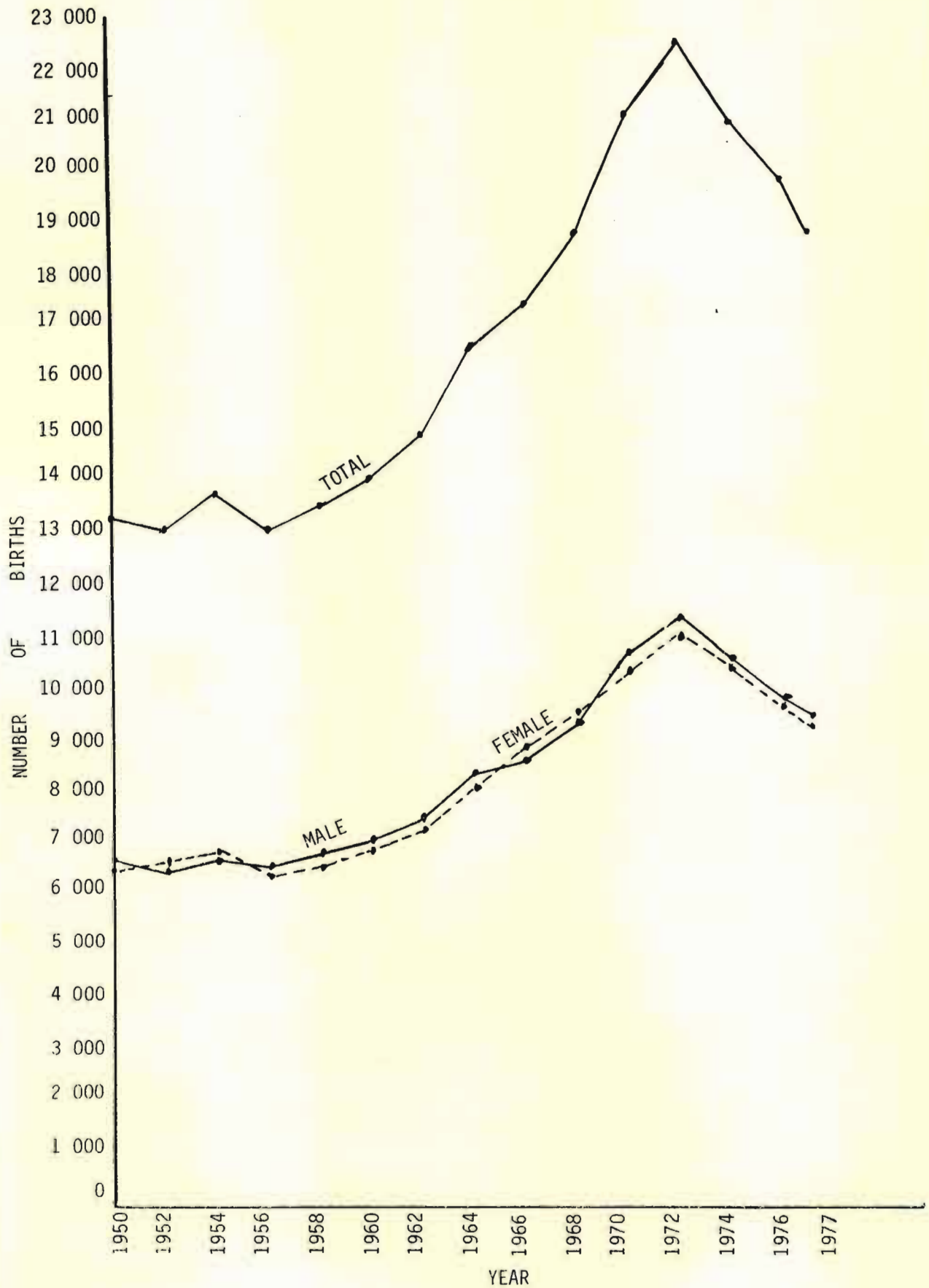


Fig. 3.2 INDIAN BIRTHS: MALE, FEMALE, TOTAL, 1950-1977

enrolments for 1968-1978; a period which is sufficiently long for reasonable inferences and extrapolations, and for which official data are available.

### 3.2 STANDARD TEN : THE PRE-UNIVERSITY YEAR

The standard ten examination determines the eligibility of students for admission to institutions of tertiary education. Students with matriculation exemption certificates are eligible for admission to a university. The number of students reaching standard ten is therefore, a crucial factor for university enrolment.

#### 3.2.1. School and Standard Ten Enrolments : 1968-1978

Table 3.1 below contains enrolment figures for the total school population and standard ten, for the period 1968-1978.

TABLE 3.1

SCHOOL AND STANDARD TEN ENROLMENTS : INDIANS; 1968-1978

Year	School Population		Standard Ten		Growth rate of Indian Population	School Population as % of Total Indian Population
	Total	Growth Rate	Total	Growth Rate		
		%		%	%	%
1968	155572	-	2692	-	2,8	26,2
1969	157891	1,5	2484	-7,7	3,4	25,7
1970	161676	2,4	2701	8,7	3,1	25,8
1971	167905	3,9	3543	31,2	2,7	25,5
1972	172142	2,5	3840	8,4	3,7	25,5
1973	176802	2,7	4033	5,0	2,5	25,6
1974	180715	2,2	4420	9,6	2,6	25,5
1975	183348	1,5	4330	-2,0	2,5	25,2
1976	188008	2,5	4310	-0,5	2,3	25,3
1977	195369	3,9	4980	15,5	2,4	26,6
1978	205136	5,0	5105	2,5	2,1	26,4
$\bar{X}$ (Mean)	-	2,8	-	-	2,7	25,8

Data in Table 3.1 were obtained from Reports of the Department of Indian Affairs : 1970-1980.

The following facts flow from Table 3.1:

- (a) The total school population (primary and secondary) increased from 155572 in 1968 to 205136 in 1978, an increase of 31,9%. The annual growth rates have been positive but fluctuating with a maximum of 5,0% in 1978 when, for the first time, Practical Grade students studied beyond standard eight.
- (b) The school population as a percentage of the total population has remained consistent - about 25,5%.
- (c) The standard ten enrolment has not shown the same consistency in growth rate as the school population or the total Indian population. While the Indian population has shown a consistent positive growth rate ranging from 2,1% to 3,7%; and the school population a positive growth rate ranging from 1,5% to 5,0%; the growth rate of the standard ten enrolment has been negative and positive ranging from -7,7% to 31,2%. This fluctuation is expected to influence first-year enrolments at university.

### 3.2.2. Standard Ten Examination Results : 1968-1978

Table 3.2 contains data relating to standard ten examination results of Indian pupils for the period 1968-1978. It shows the number of standard ten candidates, the number obtaining matriculation exemption certificates and those who obtained school leaving certificates.



TABLE 3.2

STANDARD TEN RESULTS OF SOUTH AFRICAN INDIAN CANDIDATES : 1968-1978

Year	Standard ten candidates	Number passing standard ten	Number passing with school leaving certificates	Number passing with matriculation exemption
1968	2112	1114	892	222
1969	2336	1400	974	426
1970	2605	1569	1221	348
1971	3350	1932	1397	535
1972	3494	2242	1637	605
1973	3773	2756	2165	591
1974	4200	3001	2360	641
1975	4251	3777	2569	1208
1976	4380	3677	2368	1309
1977	4871	4350	2558	1792
1978	4979	4538	2729	1809
TOTAL	40351	30356	20870	9486

Data in Table 3.2 were extracted from the Reports of the Department of Indian Affairs : 1970-1980.

Table 3.2 shows the following:

- (a) The number of Indian candidates for the Senior Certificate examinations more than doubled from 2112 in 1968 to 4979 in 1978.
- (b) Even more remarkable is the fact that over the same period the number passing standard ten had more than quadrupled : from 1114 to 4538 (Practical Grade students were excluded).
- (c) Of considerable significance is the number passing with matriculation exemption. In 1968 the figure was 222 while in 1978 it had risen to 1809, more than eight times as many. This resulted in a heavy demand on admission to university.

Figure 3.2 is a graphical representation of the growth for the period 1968-1978 of:

- (a) the number of Senior Certificate candidates,
- (b) the number of candidates passing standard ten,
- (c) the number passing standard ten without matriculation exemption,
- (d) the number passing standard ten with matriculation exemption.

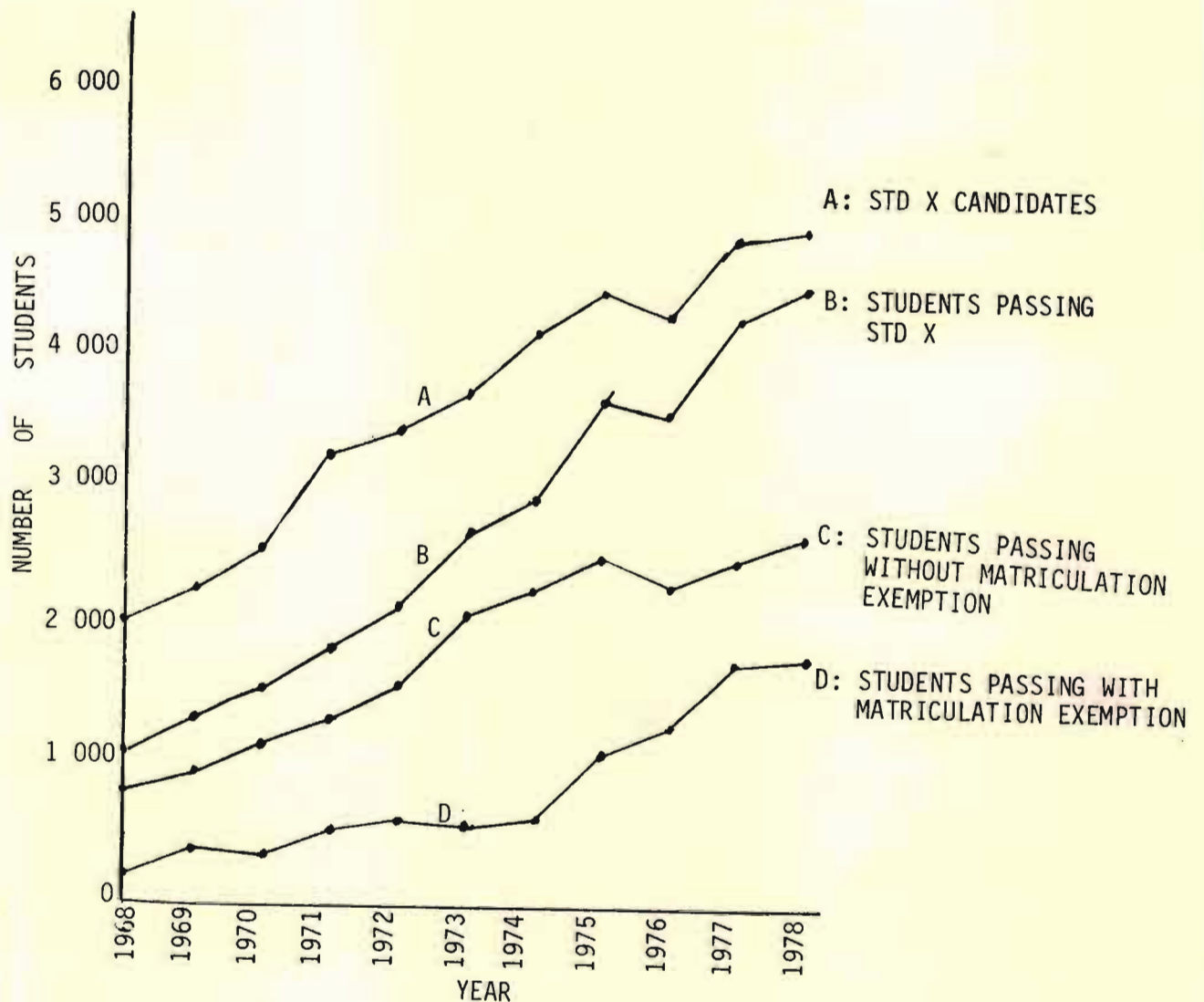


Fig. 3.3 INDIAN STANDARD TEN CANDIDATES AND RESULTS - 1968-1978

From Fig. 3.3 it is observed that:

- (a) the standard ten failure rate has been declining, especially after 1972,
- (b) as from 1975 the numbers obtaining matriculation exemption certificates increased.

### 3.2.3. Comparison of Standard Ten Results : Indian and White candidates in South Africa

Table 3.3 shows the number of candidates who obtained matriculation certificates and those with school leaving certificates at Indian and White schools respectively for the period 1968-1978.

TABLE 3.3

NUMBER OF STUDENTS PASSING STANDARD TEN WITH MATRICULATION EXEMPTION CERTIFICATES AND SCHOOL LEAVING CERTIFICATES RESPECTIVELY : WHITE AND INDIAN CANDIDATES; 1968-1978

	Number passing Standard Ten	Number passing with matriculation exemption certificates		Number passing with school leaving certificates	
		No.	%	No.	%
Whites	426085	196102	46,0	229983	54,0
Indians	30356	9486	31,2	20870	68,8

Data in Table 3,3 were obtained from the following sources:

For Whites: Erens and Louw (1978, 63)

For Indians: Reports of the Department of Indian Affairs: 1970-1979.

Table 3.3 shows that of those candidates writing Senior Certificate examinations, more White students (46,0%) obtained matriculation exemption passes than did Indian candidates (31,2%). A  $\chi^2$  was





computed for the distribution in Table 3.3 and a value of 2498,97 ( $p < 0,001$ ) was obtained. Of the candidates who passed standard ten with matriculation exemption the proportion of Whites was significantly higher than that for Indians.

A study was made of the standard ten results of Indian students in relation to age groups. In order to ascertain the percentage of an age group that passed standard ten, the number of passes in a year was compared with the number of births 18 years earlier, as the age of most pupils who enter school at 6 years, is 18 years in standard ten. This comparison appears in Table 3.4.

TABLE 3.4

PERCENTAGE OF AN AGE GROUP OBTAINING MATRICULATION AND SCHOOL LEAVING CERTIFICATES : INDIAN STUDENTS; 1968-1978

Year	Number of births 18 years earlier	Number of school leaving certificates as % of births 18 years earlier	Number of matriculation certificates as % of births 18 years earlier	Number passing Standard Ten as % of births 18 years earlier
1968	13384	6,7	1,7	8,4
1969	13014	7,5	3,3	10,8
1970	13155	9,3	2,6	11,9
1971	13527	10,3	4,0	14,3
1972	13877	11,8	4,4	16,2
1973	14197	15,2	4,2	19,4
1974	13136	18,0	4,9	22,9
1975	13486	19,0	9,0	28,0
1976	13600	17,4	9,6	27,0
1977	15002	17,1	11,9	29,0
1978	14120	18,1	12,8	30,9

The following facts flow from Table 3.4:

- (a) The percentage of an age group obtaining school leaving certificates had grown from 6,7% in 1968 to 18,1% in 1978.
- (b) The percentage of an age group obtaining matriculation exemption certificates had risen from 1,7% in 1968 to 12,8% in 1978.
- (c) The nett result is that in 1968, only about 8% of all those born 18 years earlier had passed standard ten with a matriculation or school leaving certificate. In 1978 the figure had improved to about 30%. The statistics are alarming, although the steady improvement over the period 1968-1978 gives some optimism for the future.

The above figures compare very unfavourably with those obtained in White education in South Africa. For instance, in 1977 about 60% of an age group (White) obtained a school leaving certificate and a further 27% obtained matriculation exemption; altogether 87% obtained a senior certificate, with or without matriculation exemption (Erens and Louw 1978, 35). These figures are much higher than those of 17,1%; 11,9% and 29% respectively, for Indians.

Table 3.5 shows the distribution of the percentages of age groups of South African White candidates and of Indian candidates who obtained matriculation exemption certificates and school leaving certificates for the period 1968-1978.

TABLE 3.5

STANDARD TEN RESULTS OF WHITES AND INDIANS; 1968-1978 AS PERCENTAGE OF AGE GROUPS (ALL THOSE BORN 18 YEARS EARLIER)

	Percentage of age group passing standard ten with school leaving certificates	Percentage of age group passing standard ten with matriculation exemption certificates	Percentage of age group passing standard ten
Whites	59,7	27,5	87,2
Indians	13,9	6,3	20,2

The following observations and inferences are made from Table 3.5:

- (a) 87,2% of an age group among Whites obtained a standard ten certificate (with or without matriculation exemption). Only 20,2% of Indians did so.
- (b)  $\chi^2$  was calculated for the differences (actual numbers were used). A value of 301341,66 ( $p < 0,001$ ) was obtained. Highly significant differences existed between Whites and Indians.
- (c) This big contrast in educational attainment must, *inter alia*, seriously retard not only the socio-economic advancement of the Indian community but also the industrial and economic progress of the country.
- (d) Because standard ten is the pre-university year it is important for universities, especially the University of Durban-Westville, that the magnitude of these deficiencies, both in number and attainment, be reduced considerably.

### 3.3 UNIVERSITY EDUCATION FOR SOUTH AFRICAN INDIANS

In this section a brief review of the history of university education for Indian students is given. This is followed by a discussion of the



distribution of Indian students at South African universities.

### 3.3.1. Historical Development of University Education for Indians

University education for South African Indians has a relatively short history. Beginning in the 1930's, the only institution of higher education in South Africa that admitted Indian students was the University College of Fort Hare. Subsequently the University of Cape Town and the Witwatersrand University opened their doors to Indian applicants - this was mainly in studies for a medical degree. As from 1936 the Natal University College offered courses in the Arts degree to non-White students on an extra-mural basis which was racially segregated, i.e., separation of White and non-White students. This College extended the curricula to include studies for degrees in Commerce (1946), Education (1951) and medicine (1951).

Those students who wished to study pure and applied sciences had no choice but to attend the Universities of Fort Hare, the Witwatersrand or Cape Town. A small number of students studied at overseas universities. In 1961 the University College for Indians was established in Durban.

### 3.3.2. Indian Student Enrolment at South African Universities : 1964-1978

#### 3.3.2.1. Growth of Indian Student Enrolment at South African Universities : 1964-1978

Table 3.6 shows the growth of the Indian student population at South African universities from 1964 to 1978.

TABLE 3.6

INDIAN STUDENTS AT UNIVERSITY (UNIVERSITY OF DURBAN-WESTVILLE, UNISA AND WHITE RESIDENTIAL UNIVERSITIES) AS A PERCENTAGE OF INDIAN POPULATION : 1964-1978

Year	Total Student Population		Total Indian Population	Student Population as % of Indian Population %
	No.	Annual Growth %		
1964	2460	-	531 000	0,46
1965	2613	6,2	548 000	0,48
1966	2916	11,6	566 000	0,52
1967	3037	4,1	584 000	0,52
1968	3227	6,3	601 000	0,54
1969	3362	4,2	622 000	0,54
1970	3485	3,7	642 000	0,54
1971	4223	21,2	656 000	0,64
1972	4639	9,9	674 000	0,69
1973	5018	8,2	691 000	0,73
1974	5249	4,6	709 000	0,74
1975	6358	21,1	727 000	0,87
1976	7462	17,4	744 000	1,00
1977	8232	10,3	762 000	1,08
1978	9522	15,7	778 000	1,22
$\bar{x}$	-	10,3	-	-

SOURCE: Reports of Department of Indian Affairs: 1970-1979, Pretoria.

Table 3.6 indicates the following:

- (a) While the total Indian population increased from 531 000 in 1964 to 778 000 in 1978 - an increase of 46,5% - the total student population rose sharply from 2460 to 9522 in the same period and represented an increase of 387,1%.

- (b) While the Indian student population in 1964 was less than 0,5% of the total Indian population, it had increased to just over 1% in 1978.
- (c) While the student growth fluctuated before 1975, reaching a peak in 1971, it took a sustained upward turn in 1975. The growth rate of the student enrolment averaged 7,89% over the period 1964-1975.

This is greater than the growth rate reported by Greyling (1977, 53) for White students in South Africa for the same period. From 1975 to 1978 the average annual growth rate for Indian students was 16,1% - a clear indication that Indian students are entering universities in increasingly large numbers.

The following figures illustrate graphically the growth over the period 1964-1978 of:

- the Indian population (Fig. 3.4),
- the Indian student population at universities (Fig. 3.5),
- the student population as a percentage of the total population (Fig. 3.6).

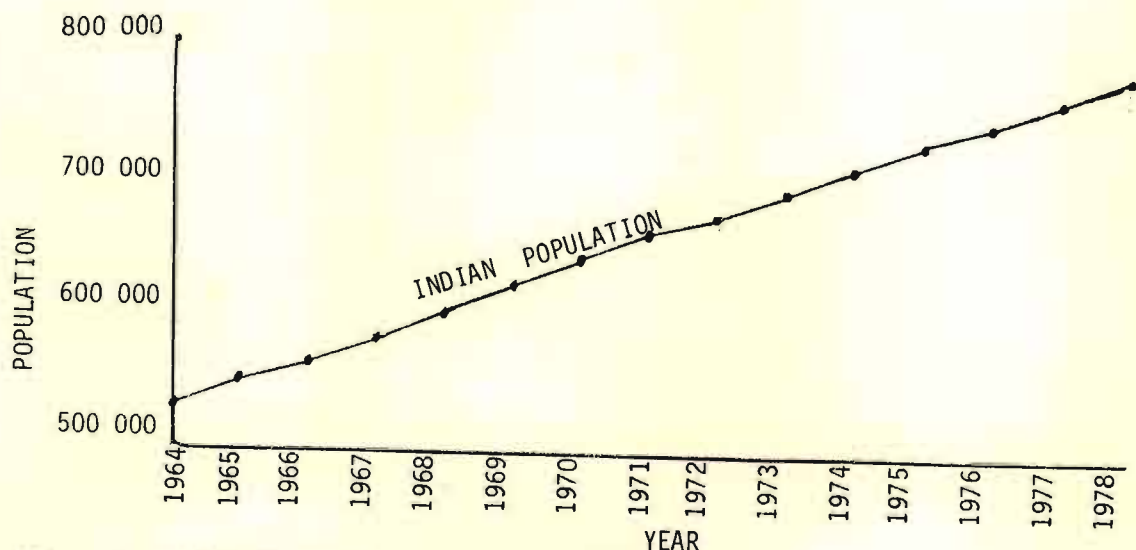


Fig. 3.4 GROWTH OF INDIAN POPULATION: 1964-1968



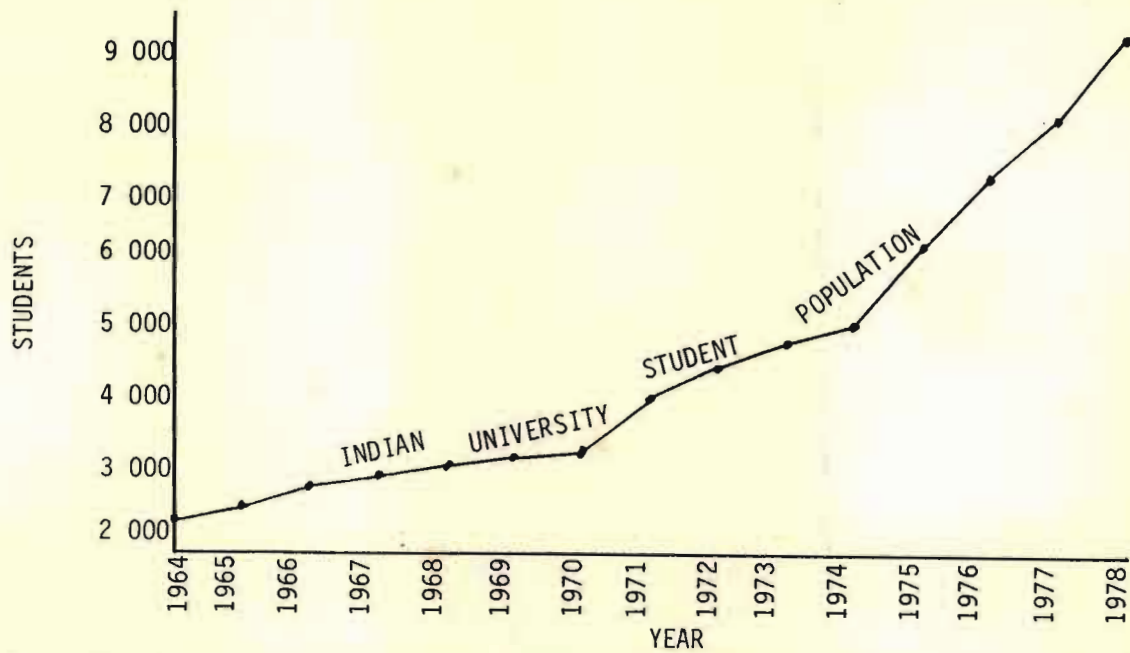


Fig. 3.5 GROWTH OF UNIVERSITY (INDIAN) POPULATION: 1964-1978

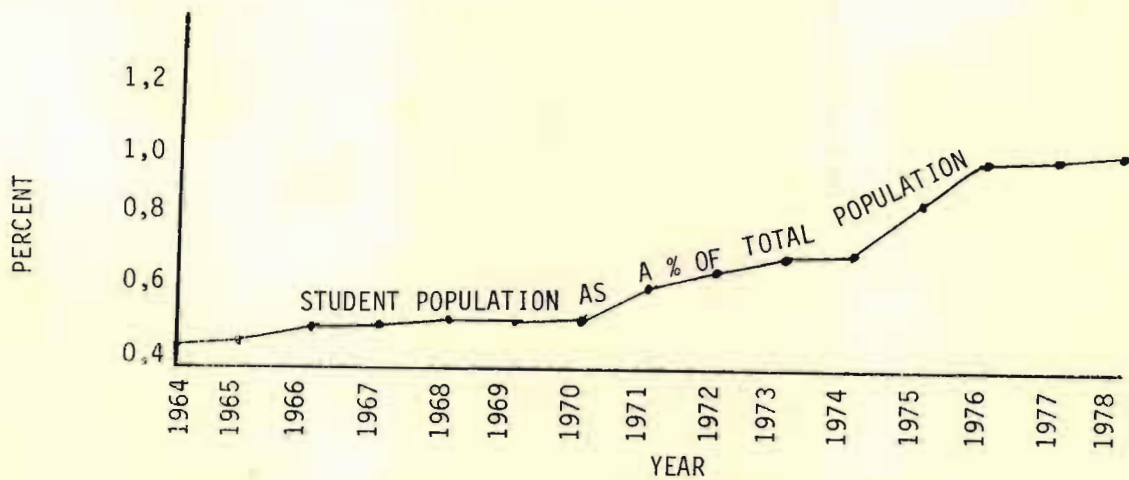


Fig. 3.6 GROWTH OF UNIVERSITY STUDENT POPULATION AS A PERCENTAGE OF TOTAL POPULATION (INDIANS) : 1964-1978.

Figures 3.4, 3.5 and 3.6 illustrate graphically that, whereas the Indian population growth rate has shown a decline since 1975, the student enrolment figures have revealed a marked increase. This is confirmed by the proportion of students in relation to the total population, which rose from 0,45% in 1964 to 1,22% in 1978. In no single year has there been a negative growth rate in student enrolment. The Indian Community is heavily committed to education

because, as Sanford (1962, 71) states, "going to university is *the* road to membership of a profession, and to all the benefits of improved economic and social status". This is a universal goal as Erens and Louw (1976, 7) found among White South African university graduates of whom a majority stated that they went to university to study for some specific type of employment or profession.

#### 3.3.2.2. Need for Greater Increase in Indian Enrolment at University

Although the enrolment of Indian students at South African universities has increased in recent decades, it is still considerably lower than those at White South African universities. One might be misled into believing that enrolment is satisfactory if inferences are made only from the following data:

- (a) Between 1960 and 1970 Indian student enrolment at university more than trebled from 1044 to 3485,
- (b) Between 1970 and 1980 an even greater increase was expected.

However a different picture emerges when enrolment for Indians is seen in perspective against corresponding data from White universities in South Africa, as well as from selected overseas universities.

Table 3.7 shows the university populations in 1977 of South African Indian and White students as percentages of the total Indian and the total White population respectively for each of the following three cases:

- (a) enrolment at all South African universities (Unisa included),
- (b) enrolment at all residential universities,
- (c) enrolment of Whites at White residential universities and of Indians at the Indian residential university.

TABLE 3.7

UNIVERSITY STUDENT POPULATION AS A PERCENTAGE OF TOTAL POPULATION FOR THE YEAR 1977 : WHITE AND INDIAN

Universities	White		Indian	
	Total	% of Population	Total	% of Population
All South African Universities (Unisa included)	111343	2,5	8232	1,1
All South African residential universities	76525	1,75	4656	0,6
Whites at White residential universities and Indians at the Indian residential university	76525	1,75	3522	0,5

The following observations and inferences are made from Table 3.7:

- (a) A larger percentage of the White population (2,5%) than of the Indian (1,1%) attended universities in South Africa. This difference was highly significant as proved by  $\chi^2 = 6695,49$  ( $p < 0,001$ ).
- (b) If the students at Unisa are excluded, then the percentages are 1,75% for Whites and 0,6% for Indians. This difference was again highly significant with  $\chi^2 = 5382,88$  ( $p < 0,001$ ). The 0,6% of Indian population at residential universities compares unfavourably with corresponding figures for universities in certain overseas countries: Australia 1,13% (1976); Canada 2,24% (1974/1975); United States of America 3,35% (1975/1976) (Erens and Louw, 1978, 36).
- (c) If residential universities are selected on ethnic lines, i.e., White residential universities for White students and the Indian residential university for Indians, then the percentages



are 1,75% for Whites and 0,5% for Indians. The Indian enrolments will have to treble to match those of Whites.

A brief analysis of Indian student enrolment at South African universities will be made before a detailed study is undertaken of the only residential university for Indians in South Africa, i.e., the University of Durban-Westville. Two principal issues are analysed:

- (a) student enrolment and
- (b) academic awards at the university.

### 3.3.3. Distribution of Indian Students at South African Universities

Indian students in South Africa attend the University of Durban-Westville, certain White residential universities - in particular the English speaking ones - and are also enrolled as correspondence students of Unisa. Table 3.8 shows the distribution of Indian students at these institutions for the period 1964-1978.

TABLE 3.8

DISTRIBUTION OF INDIAN STUDENTS AT THE UNIVERSITY OF DURBAN-WESTVILLE, UNISA AND CERTAIN WHITE RESIDENTIAL UNIVERSITIES IN SOUTH AFRICA : 1964-1978

Year	Total	University of Durban-Westville		Unisa		White Residential Universities	
		No.	%	No.	%	No.	%
1964	2460	847	34,4	790	32,1	823	33,5
1965	2613	973	37,2	893	34,2	747	28,6
1966	2916	1129	38,7	1024	35,1	763	26,2
1967	3037	1258	41,4	1021	33,6	758	25
1968	3227	1407	43,6	1094	34	726	22,5
1969	3362	1621	48,2	996	29,6	745	22,2
1970	3486	1654	47,5	1014	29,1	818	23,5
1971	4223	1710	40,5	1662	39,4	851	20,2
1972	4639	2003	43,2	1785	38,5	851	18,3
1973	5018	2192	43,7	1938	38,6	888	17,7
1974	5249	2342	44,6	2019	38,5	888	16,9
1975	6358	2674	42,1	2816	44,3	868	13,7
1976	7462	3214	43,1	3347	44,9	901	12,1
1977	8232	3522	42,8	3576	43,4	1134	13,8
1978	9522	4201	44,1	3927	41,2	1394	14,6

Figure 3.7 (page 58) gives a graphical illustration of the data in Table 3.8.

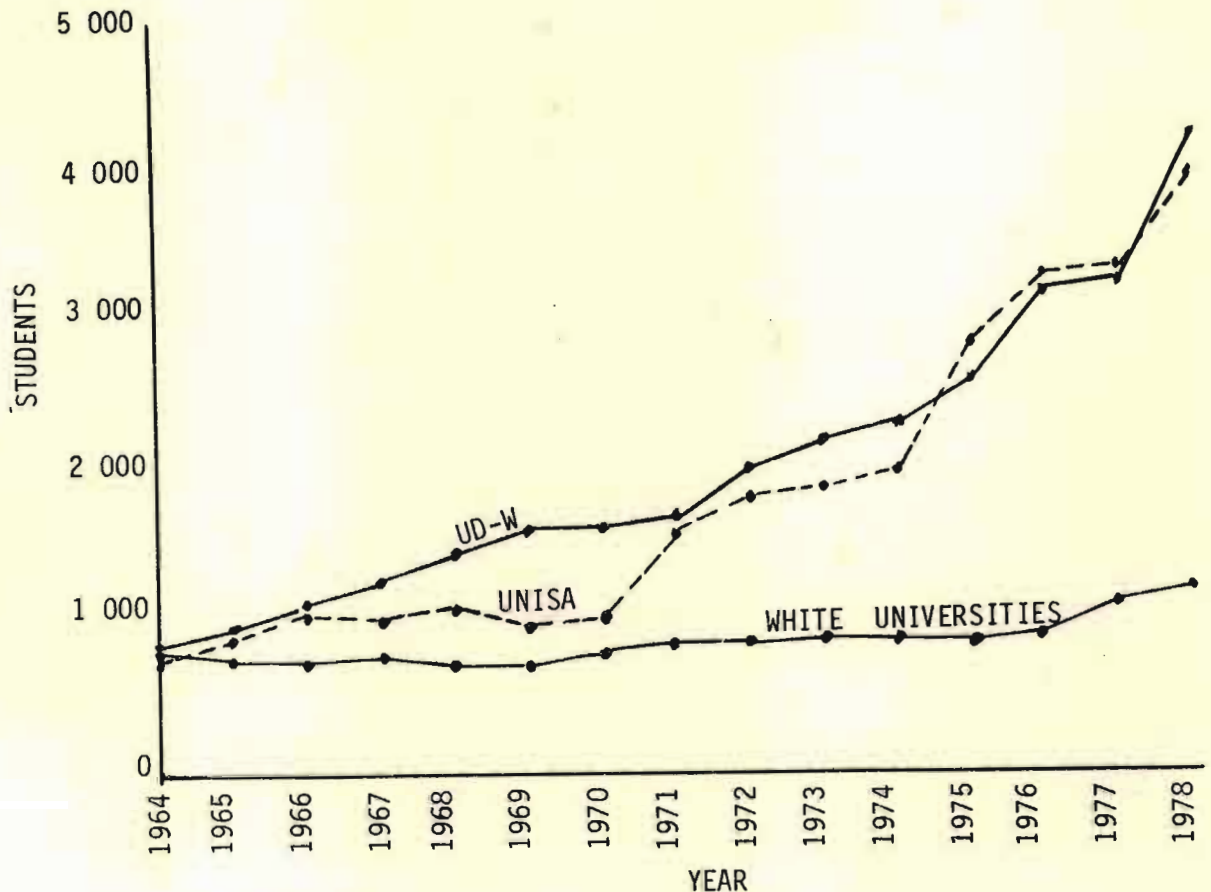


Fig. 3.7 INDIAN STUDENTS AT SOUTH AFRICAN UNIVERSITIES: 1964-1978

A study of Table 3.8 and Fig. 3.7 reveals the following:

- (a) The 1964 data show that Indian students were distributed almost equally among:

University of Durban-Westville	:	34,4%	
Unisa	:	32,1%	and
certain White residential universities	:	33,5%	

- (b) While the University of Durban-Westville and Unisa have shown increases in the percentages of Indian students they enrol, the White universities have shown a definite decline. The enrolment at the University of Durban-Westville increased from 34,4% in 1964 to 44,1% in 1978. During the same period the



enrolment at Unisa increased from 32,1% to 41,2% but the White universities showed a decrease from 33,5% to 14,6%.

- (c) As from 1977, however, the White universities have shown a moderate but consistent increase in their admission of Indian students. This is the result of a partial relaxation of the permit system applicable to Indians intending to study at White universities, and the desire among White universities to admit as many students as possible in order to increase their revenue through State subsidies. However, the University of Durban-Westville, which will be studied in some detail in the next section, is expected to have the highest percentage of Indian residential university students for some time to come.

#### 3.4. THE UNIVERSITY OF DURBAN-WESTVILLE

In this section there will be a study of the growth of student enrolment at the University of Durban-Westville. This will include analyses of the male-female and full-time-part-time characteristics of its enrolment; a study of the staff growth and the student-staff ratio. A study will also be made of academic awards at the University since its inception.

##### 3.4.1. The Rapid Growth of the University of Durban-Westville

In terms of the Extension of University Education Act of 1959, a University College for Indians was established in 1961 in Durban. In 1963 it was transferred from the Department of Education, Arts and Science to the Department of Indian Affairs. From 1961 to 1971 the University College was accommodated in converted military barracks on Salisbury Island in Durban Bay. In 1972 the University College moved to the present campus on Chiltern Hills. By virtue of the University of Durban-Westville Act (1969) the College obtained the status of a

University in 1971, acquiring full academic autonomy.

When the University College was opened (1961) it carried 2 Faculties : Arts and Science. Other Faculties established subsequently were Education in 1962; Commerce in 1965; Law in 1971; and Engineering, Theology and Health Sciences in 1980.

The 1961 teaching staff of sixteen - 14 Whites and 2 Indians - had grown to 298 in 1979 of whom 192 were Whites and 106 Indians.

The student enrolment figures increased from 111 in 1961 to 4652 in 1979. Of the 111 students who enrolled in 1961, 103 (90%) were males and 11 (10%) females. A remarkable growth in the female enrolment resulted in females totalling 1570 (34%) compared with 3082 (66%) males in the 1979 total of 4652. By traditional South African university standards the University of Durban-Westville is now a large university.

In 1963 the University College awarded its first degrees and diplomas. Of the three awards, two were Bachelor's degrees and one was a diploma. In 1971 the University, awarding its own degrees for the first time, conferred 153 degrees and 77 diplomas and certificates. Of the degrees, 30 were post-graduate and of the diplomas and certificates 35 were post-graduate. In 1979, degrees awarded numbered 430 while diplomas and certificates awarded totalled 174.

During the period 1963-1979 nearly 3500 students obtained degrees and more than 1100 students, diplomas and certificates.

Up to 1975 the semester system was optional but was not used a great deal at the university. As from 1976 all departments in the Faculty of Commerce adopted the semester system, which entails more

administrative work but was believed to have educational advantages. An attempt will be made to evaluate this when examination results are analysed in chapters that follow.

According to Behr (1980, 4) the growth rate per annum of the University of Durban-Westville for the period 1970-1980 was 11,9%. This rate is greater than that of the older White universities - which showed moderate annual growth rates, ranging from 2,6% for the University of Cape Town to 8,7% for the University of the Orange Free State - but less than that of the younger White universities, for example : University of Port Elizabeth and Rand Afrikaans University, whose growth rates were 12,5% and 15% respectively. In the present year, 1982, the University of Durban-Westville has grown into a large university with over 5000 students and an academic staff of over 330. The admission requirements are the same as for any other South African university.

From the foregoing it is evident that the University of Durban-Westville is consolidating itself as a South African university. Some specific features of its academic growth will now be analysed.

#### 3.4.2. Full-Time and Part-Time Students at the University of Durban-Westville

Table 3.9 (p. 62) shows the distribution of students - total, full-time, part-time - at the University of Durban-Westville for the period 1964-1980.



TABLE 3.9

FULL-TIME AND PART-TIME STUDENT ENROLMENT AT THE UNIVERSITY OF DURBAN-WESTVILLE : 1964-1980

Year	Full-Time		Part-Time		Total
	No.	%	No.	%	
1964	564	66,6	283	33,4	847
1965	661	67,9	312	32,1	973
1966	745	66,0	384	34,0	1129
1967	812	64,6	446	35,5	1258
1968	909	64,6	498	35,4	1407
1969	1070	66,0	551	34,0	1621
1970	1107	67,0	547	33,1	1654
1971	1110	64,9	600	35,1	1710
1972	1492	74,5	511	25,5	2003
1973	1725	78,7	467	21,3	2192
1974	1978	84,5	364	15,5	2342
1975	2229	83,4	445	16,6	2674
1976	2675	85,6	449	14,4	3124
1977	2970	84,3	552	15,7	3522
1978	3467	82,5	734	17,5	4201
1979	3698	79,5	954	20,5	4652
1980	3763	75,2	1240	24,8	5003

Figure 3.8 (Page 63) represents graphically the growth of full-time, part-time and total enrolment at the university.

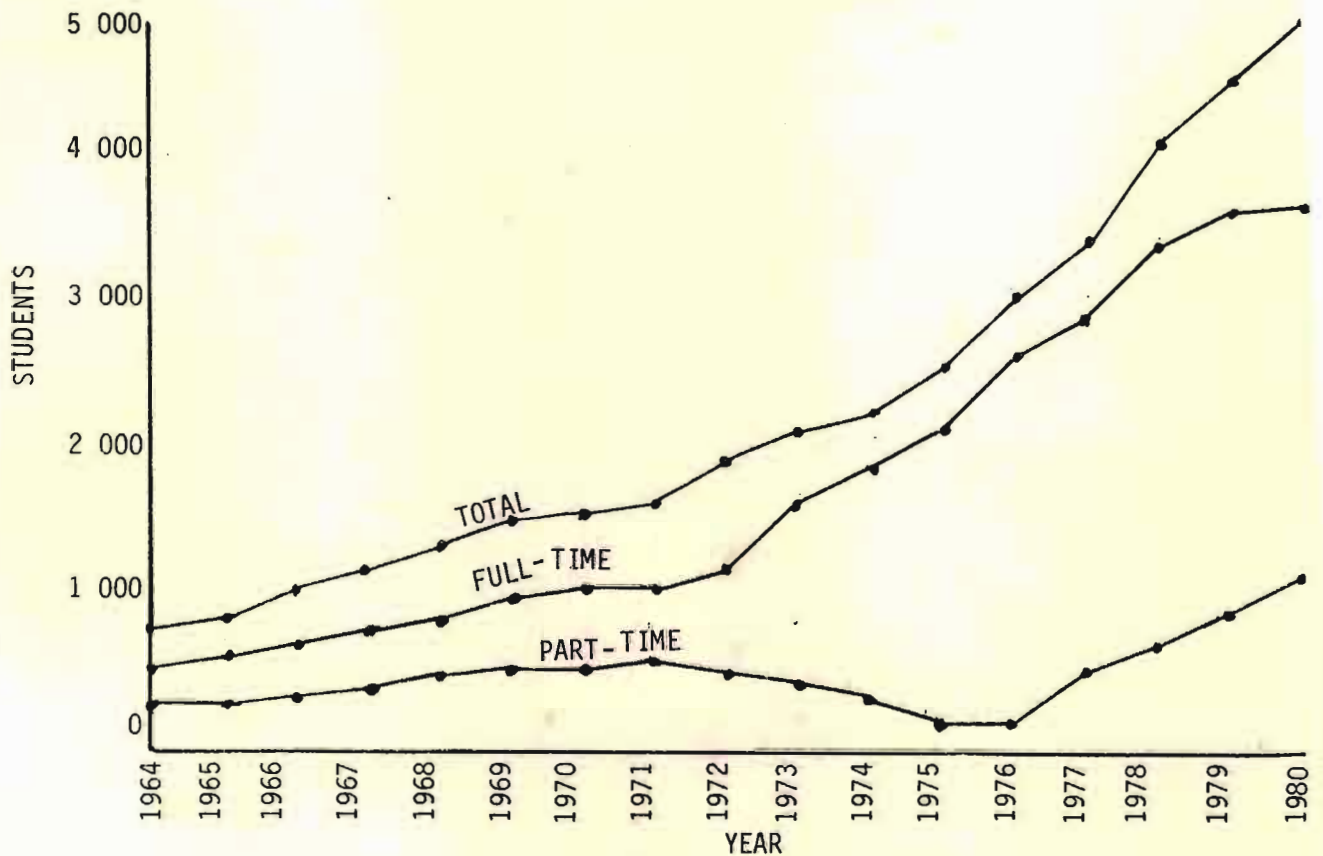


Fig. 3.8 STUDENT ENROLMENT: FULL-TIME, PART-TIME (UD-W): 1964-1980

An examination of table 3.9 and figure 3.8 reveals the following features:

- (a) For the period 1964-1971 the part-time students formed a numerically important component of the enrolment at the University, with the representation exceeding 30% of the total enrolment.
- (b) As from 1972, however, the number of part-time students decreased and in 1976 they represented 14,4% of the total enrolment. This drop was highly significant:  $\chi^2 = 40,34$  ( $p < 0,001$ ). The main reason for the decrease was the closure of the venue in the city (Durban) centre for the part-time

lectures, which moved to the new campus at Chiltern Hills which was "out of the way" in terms of easy access by road and public transport. It is believed that many prospective part-time students chose Unisa instead.

- (c) However, there has been a noticeable improvement in part-time enrolment since 1977. The increase in the proportion of part-time students - 13,97% in 1976 to 24,79% in 1980 - suggests a possible return to the proportions of the past. This increase was highly significant;  $\chi^2 = 126,65\%$  ( $p < 0,001$ ).
- (d) Over the years the full-time enrolment has grown considerably from 564 in 1964 to 3763 in 1980. While in the sixties full-time students represented about 64% of the total enrolment, in the seventies this figure had increased to about 82%.

#### 3.4.3. Male-Female Distribution of Students at the University of Durban-Westville

While the ratio of males to females in the total Indian population was about 1:1, there was a marked difference in the distribution of the sexes at the University as shown in Table 3.10 (page 65).



TABLE 3.10

MALE-FEMALE DISTRIBUTION OF STUDENTS AT THE UNIVERSITY OF  
DURBAN-WESTVILLE : 1964-1980

Year	Male		Female		Total
	No.	%	No.	%	
1964	743	87,7	104	12,3	847
1965	831	85,4	142	14,6	973
1966	934	82,7	195	17,3	1129
1967	1010	80,3	248	19,7	1258
1968	1117	79,4	290	20,6	1407
1969	1273	78,5	348	21,5	1621
1970	1267	76,6	387	23,4	1654
1971	1313	76,8	397	23,2	1710
1972	1473	73,5	530	26,5	2003
1973	1601	73,0	591	27,0	2192
1974	1641	70,1	701	29,9	2342
1975	1880	70,3	794	29,7	2674
1976	2143	68,6	981	31,4	3124
1977	2437	69,2	1085	30,8	3522
1978	2808	66,8	1393	33,2	4201
1979	3082	66,3	1570	33,7	4652
1980	3231	64,6	1772	35,4	5003

Figure 3.9 (Page 66) illustrates graphically the distribution of Indian students on the basis of sex for the period 1964-1980.

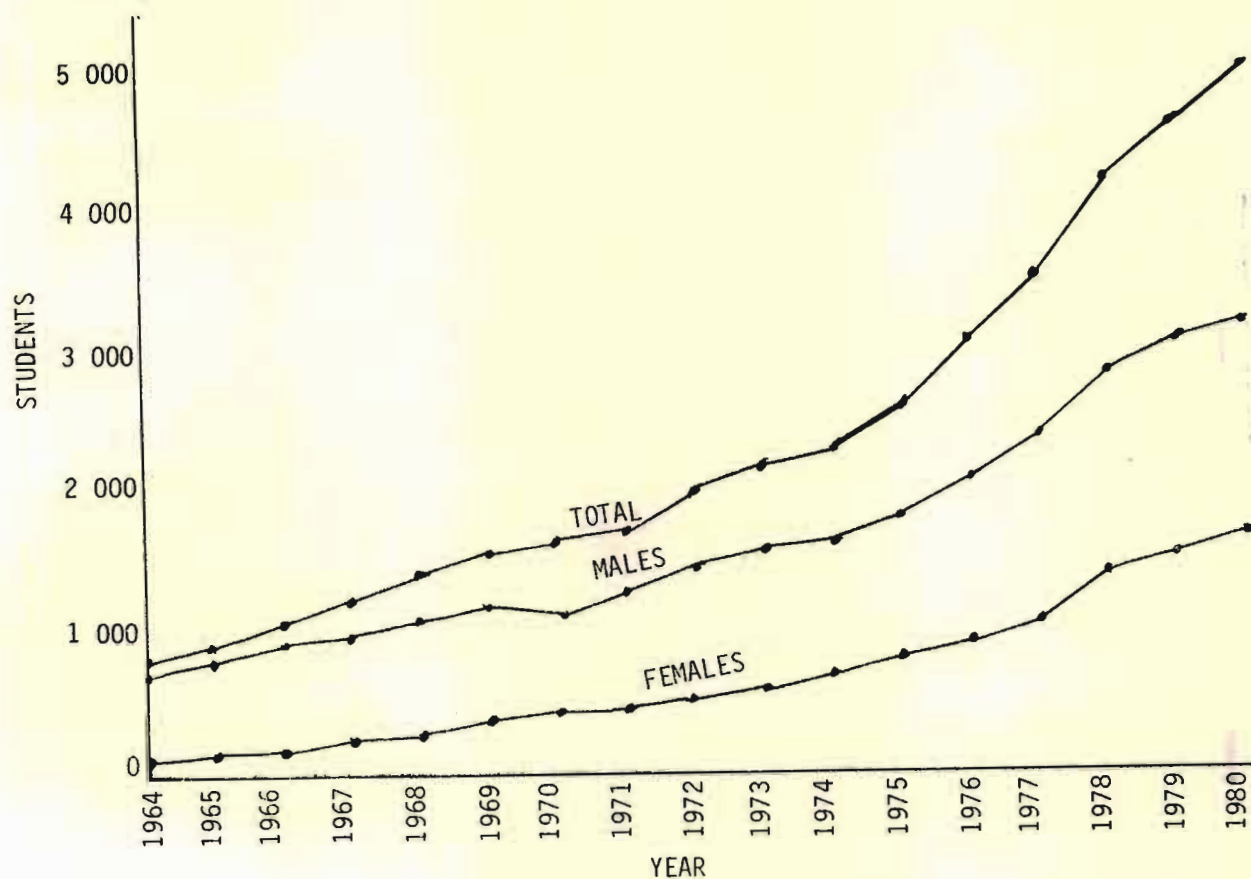


Fig. 3.9 STUDENT ENROLMENT: MALE, FEMALE (UD-W): 1964-1980

Table 3.10 shows that females comprised an increasing proportion of the student population at the University. From 12,3% in 1964 the female population had risen to 35,4% of the total in 1980. Figure 3.9 illustrates the consistent growth, after 1970, of the male and female enrolments.

A comparison was made of the distributions of the sexes at the University of Durban-Westville with the White residential universities for the year 1978. See Table 3.11 (Page 67).

TABLE 3.11

MALE-FEMALE DISTRIBUTIONS OF STUDENTS AT WHITE RESIDENTIAL UNIVERSITIES AND AT THE UNIVERSITY OF DURBAN-WESTVILLE

	Male		Female		$\chi^2$	p
	No.	%	No.	%		
University of Durban-Westville	2808	66,8	1393	33,2	476,72	p < 0001
White Residential Universities	49437	62,7	2939	37,3	5097,68	p < 0,001

The following observations and inferences are made from Table 3.11:

- (a) Females comprised a larger percentage of the total at White universities (37,3%) than at the University of Durban-Westville (33,2%).
- (b) A  $\chi^2$  was computed to see if the difference was significant or not. A  $\chi^2$  value of 29,11 ( $p < 0,001$ ) was obtained. There was a highly significant difference between the proportion of males and females at White residential universities and at the University of Durban-Westville. A significantly greater proportion of White students attending university was females.
- (c) The growth in the enrolment of male students at the University of Durban-Westville has continued but the female student growth rate has exceeded that of the males.
- (d) However, there has always been a significantly greater number of males than females at the University;  $\chi^2 = 476,72$  ( $p < 0,001$ ). A similar situation existed at White residential universities;  $\chi^2 = 5097,68$  ( $p < 0,001$ ).



Computations were made to compare female and male numerical growth at the University of Durban-Westville with that at the White universities over the decade 1968-1978. Table 3.12 shows the distribution.

TABLE 3.12

FEMALE-MALE DISTRIBUTIONS AT THE UNIVERSITY OF DURBAN-WESTVILLE AND AT THE WHITE RESIDENTIAL UNIVERSITIES IN 1968 AND 1978

YEAR	University of Durban-Westville				White Residential Universities			
	Female		Male		Female		Male	
	No.	%	No.	%	No.	%	No.	%
1968	290	20,6	1117	79,4	14406	29,6	34320	70,4
1978	1393	33,2	2808	66,8	29391	37,3	49437	62,7

Table 3.12 shows that at both the University of Durban-Westville and the White residential universities, female students increased significantly from 1968 to 1978 when compared with males.

#### 3.4.4. Distribution of Students : Full-Time and Part-Time, according to Sex

Figure 3.10 (Page 69) illustrates the distribution of male and female full-time and part-time students at the University of Durban-Westville for the period 1964-1980. (Appendix 4 contains the data shown graphically - see p. 388).

Figure 3.10 clearly illustrates two facts:

- (a) There was a rapid growth in the female full-time student enrolment at the University of Durban-Westville after 1971. The increase

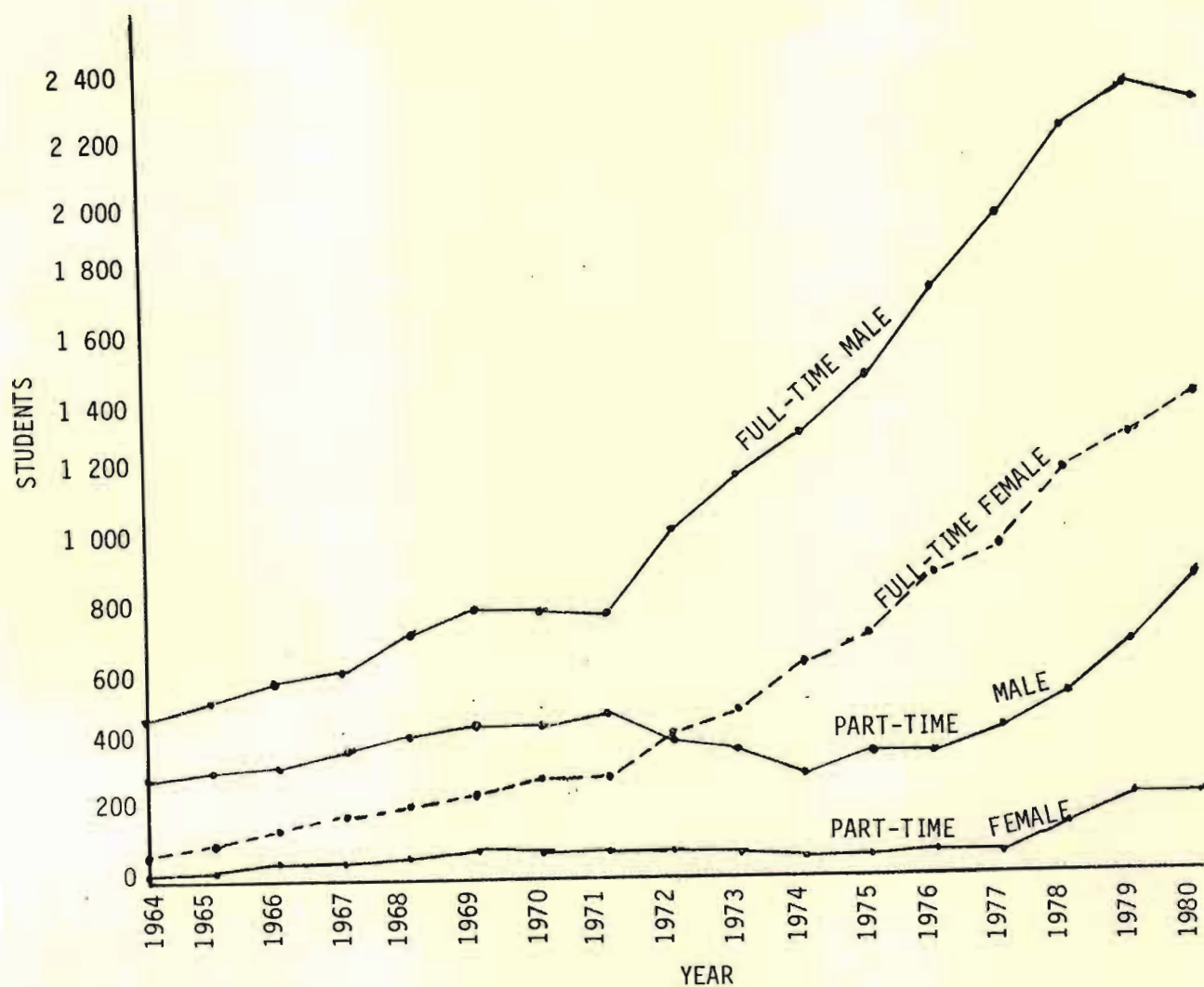


Fig. 3.10 DISTRIBUTION OF FULL-TIME AND PART-TIME STUDENTS ACCORDING TO SEX: 1964-1980

in the part-time female students was small.

- (b) As from 1978 however, there was a noticeable increase in part-time enrolment - male and female. One of the reasons for this was the desire among practising teachers to improve their qualifications.

The male-female distributions among full-time students and part-time students were tested to see if significant differences existed.

Table 3.13 (Page 70) shows this distribution for 1970-1980.

TABLE 3.13

MALE-FEMALE DISTRIBUTION AMONG FULL-TIME AND PART-TIME STUDENTS AT THE UNIVERSITY OF DURBAN-WESTVILLE : 1970-1980

	Full-Time		Part-Time	
	No.	%	No.	%
Male	17394	66,4	5482	79,9
Female	8820	33,6	1381	20,1

$\chi^2$  for the above distribution was 466,39 ( $p < 0,001$ ). Female students formed a significantly greater proportion of full-time students than part-time.

With the analyses of the university enrolment on a full-time-part-time basis, as well as on a male-female basis complete, a study of enrolment on a Faculty basis follows.

#### 3.4.5. Student Enrolment at the University of Durban-Westville according to Faculty

Table 3.14 (Page 71) shows the distribution of students according to Faculty for the period 1964-1980. Percentages of students per Faculty are also given.



TABLE 3.14

STUDENT ENROLMENT AT THE UNIVERSITY OF DURBAN-WESTVILLE ACCORDING TO FACULTY : 1964-1980

Year	Arts		Commerce		Education		Law		Science		Total
	No.	%	No.	%	No.	%	No.	%	No.	%	
1964	405	47,8	27	3,2	157	18,5	-	-	258	30,5	847
1965	467	48	29	3	226	23,2	-	-	251	25,8	973
1966	549	48,7	60	5,3	256	22,7	4	0,4	259	23	1128
1967	639	51,1	91	7,3	254	20,3	13	1	254	20,3	1251
1968	652	46,7	129	9,2	290	20,8	28	2	298	21,3	1397
1969	733	45,3	220	13,6	266	16,4	42	2,6	358	22,1	1619
1970	727	44,3	260	15,8	265	16,1	68	4,1	322	19,6	1642
1971	743	43,7	305	18	240	14,1	65	3,8	347	20,4	1700
1972	674	33,8	406	20,4	335	16,8	90	4,5	488	24,5	1993
1973	700	32,1	455	20,9	344	15,8	104	4,8	576	26,4	2179
1974	649	27,9	532	23	386	16,6	133	5,7	625	26,7	2325
1975	700	26,4	690	26,1	470	17,8	110	4,2	678	25,6	2648
1976	825	26,5	751	24,2	611	19,7	183	5,9	738	23,7	3108
1977	932	26,7	805	23,1	738	21,2	215	6,2	796	22,8	3486
1978	1332	32,0	885	21,3	812	19,5	235	5,7	895	21,5	4159
1979	1832	39,8	822	17,9	929	20,2	201	4,4	820	17,8	4604
1980	1985	40,7	770	15,8	1055	21,6	162	3,3	903	18,5	4875

Note:

- (a) Occasional students are excluded from Table 3.14.
- (b) Up to 1979 only the five Faculties listed in Table 3.14 existed. In 1980, three more Faculties - Engineering, Health Sciences and Theology - came into existence, but their numbers for 1980 are included in the Faculties from which they emerged, i.e., Engineering and Health Sciences in the Science Faculty and Theology in the Arts Faculty.

A study of Table 3.14 reveals the following features:

- (a) All Faculties exhibited a continuous increase in enrolment.
- (b) In the sixties the Faculty of Arts accounted for nearly 50% of the total enrolment; the Faculties of Education and Science about 20% each; Commerce under 10%; Law about 1%.
- (c) The Faculty of Arts always enrolled the largest number of students but as from 1968 this number became a declining proportion of the student enrolment, falling from 51,1% in 1967 to 25,8% in 1976. This decrease is attributed to the rapid growth of the Faculty of Commerce from 7,3% in 1967 to 23,5% in 1976, and to a lesser extent, Science.
- (d) The Faculty of Law showed a generally, small, steady growth since its inception.
- (e) The Faculty of Education showed a decline in the early 1970's but recovered to about 20% of the total enrolment in 1980.

Figure 3.11 (Page 73) is a graphical representation of the data relating to student enrolment in each Faculty over the period 1964 to 1980.

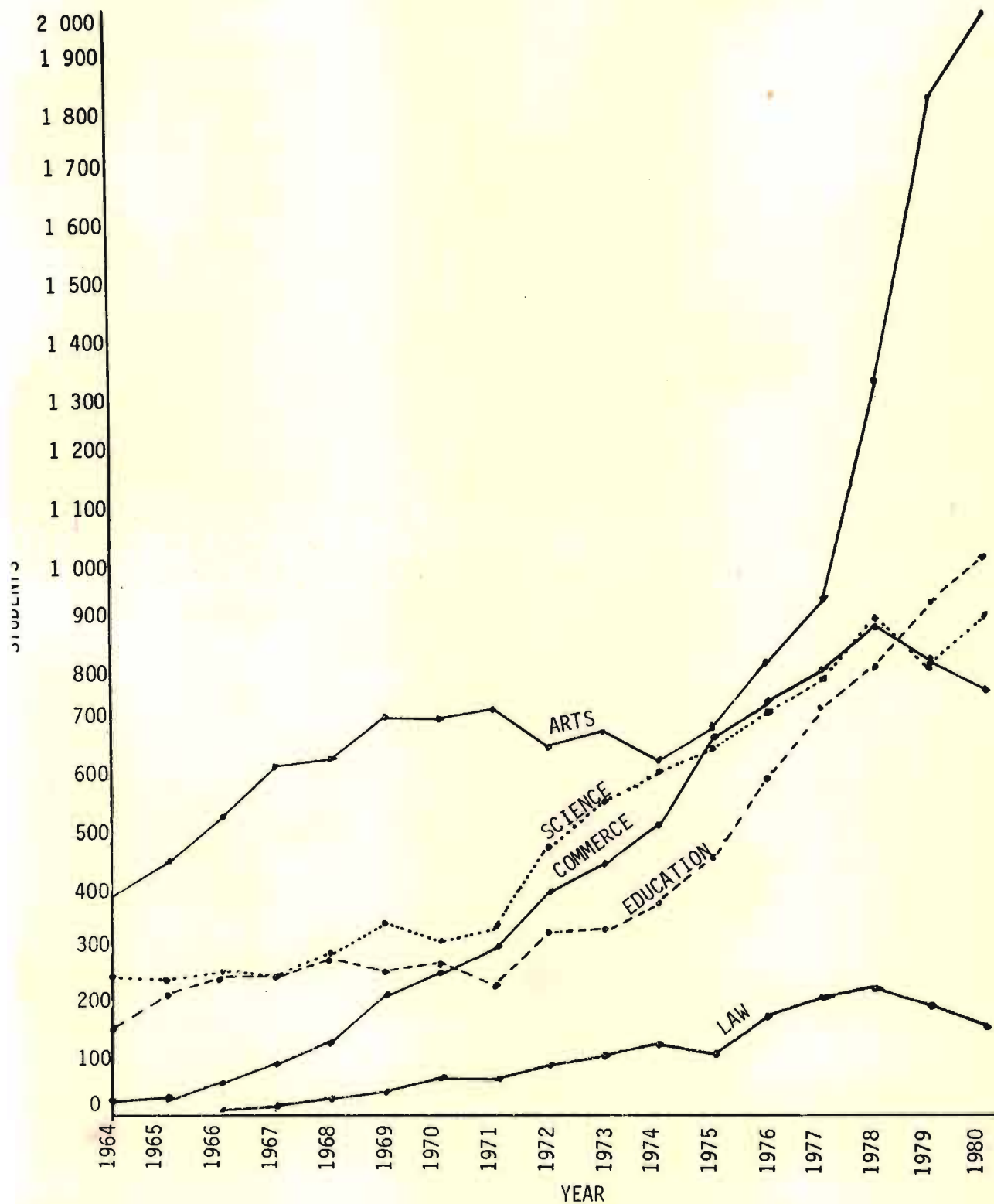


Fig. 3.11 STUDENT ENROLMENT ACCORDING TO FACULTY AT UD-W: 1964-1980

Table 3.14 and Figure 3.11 reveal some interesting developments since



1971. The enrolment in the Faculty of Arts has improved from 26,7% in 1977 to 40,7% in 1980, but in the Faculties of Science, Commerce and Law numbers declined over the same period : Science dropped from 22,8% to 18,5%; Commerce from 23,1% to 15,8% and Law from 6,2% to 3,3%. Enrolments in the Faculty of Education were stable. There are many possible contributing factors including:

- (a) changes in the occupational preferences of students,
- (b) the system of differentiation in the senior secondary phase of high school, which resulted in an increase in the number of matriculants in all fields of study, except the natural sciences,
- (c) the introduction of the semester system in the Faculties of Commerce and Science,
- (d) the increase in the enrolment of part-time students who prefer to study in the Faculties of Arts and Education,
- (e) changes in admission requirements of some Faculties, e.g., Science and Commerce,
- (f) the pass rates in the various Faculties, with students trying to avoid Faculties with a bad record of high failure rates.

However, the situation at the University of Durban-Westville is not unique : its enrolment pattern is not unlike that at White residential universities where there has always been a predominance of students in the Arts Faculty. In the mid-seventies an increase was observed in White enrolments for Commerce and Public Administration but there has been a continual decline in the enrolment for Science (Erens and Louw, 1978, 39).

#### 3.4.6. Student-Staff Ratio at the University of Durban-Westville

It is necessary to examine the growth in the numbers of staff in each

Faculty to see if the growth of staff matched the growth of students. The student-staff ratio can be an important indicator of success or failure.

#### 3.4.6.1. Staff Growth and Student-Staff Ratios at the University of Durban-Westville

Table 3.15 shows the student-staff ratio at the University of Durban-Westville for the period 1961-1980; and that at the White residential universities for which figures were available only up to 1975.

TABLE 3.15

STUDENT-STAFF RATIOS AT THE UNIVERSITY OF DURBAN-WESTVILLE (1961-1979)  
AND WHITE RESIDENTIAL UNIVERSITIES (1961-1975)

Year	University of Durban-Westville			White Residential Universities Student-Staff Ratio
	Staff Total	Student Total	Student-Staff Ratio	
1961	16	114	7,1	13,5
1962	38	433	11,4	13,2
1963	57	614	10,8	13,2
1964	81	847	10,5	12,5
1965	92	973	10,6	12,7
1966	118	1129	9,6	13
1967	133	1258	9,5	13
1968	141	1407	10,0	13,1
1969	137	1621	11,8	12,8
1970	151	1654	11,0	12,7
1971	170	1710	10,1	11,9
1972	153	2003	13,1	12,1
1973	191	2192	11,5	12
1974	215	2342	10,9	12,3
1975	230	2672	11,6	10,3
1976	239	3214	13,4	-
1977	255	3522	13,8	-
1978	274	4201	15,3	-
1979	298	4652	15,6	-
1980	305	5003	16,4	-

The following observations are made from Table 3.15:

- (a) When the total student enrolment and total lecturing staff are considered, the student-staff ratios for the first 10 years of the university's existence shows a stable ratio, approximately 1:10.
- (b) After 1971 there had been a slow but continuous decline, and in 1979 the ratio had changed to just over 1:15.
- (c) By contrast the student-staff ratios at White residential universities has actually improved from about 1:13 in the 1960's to about 1:12 in the 1970's.

#### 3.4.6.2. Student-Staff Ratios per Faculty at the University of Durban-Westville

In order to ascertain how the change in the student-staff ratio of the entire university has distributed itself over the various Faculties, student-staff ratios were computed on a Faculty basis.

Table 3.16 (Page 77) shows the student-staff ratios per Faculty. The period of study is 1971-1980 (official data pertaining to staff on a Faculty basis were available only from 1971 onwards).

A study of Table 3.16 (Page 77) reveals the following information:

- (a) Science had the most favourable student-staff ratios ranging from 9,3 to 12,2.
- (b) The Commerce Faculty had unfavourable ratios ranging from 20,3 to 27,7.
- (c) The Faculty of Arts had favourable ratios up to 1977 after which there was a decline.



TABLE 3.16

UNIVERSITY OF DURBAN - WESTVILLE : STUDENT-STAFF RATIO PER FACULTY; 1971-1980

Year	F A C U L T Y														
	Arts			Commerce			Education			Law			Science		
	Students	Staff	Student-Staff Ratio	Students	Staff	Student-Staff Ratio	Students	Staff	Student-Staff Ratio	Students	Staff	Student-Staff Ratio	Students	Staff	Student-Staff Ratio
1971	743	59	12,6	305	15	20,3	240	41	5,9	65	9	7,2	347	46	7,5
1972	674	60	11,2	406	13	31,2	335	32	10,5	90	8	11,3	488	40	12,2
1973	700	67	10,4	455	22	20,7	344	44	7,8	104	8	13,0	576	50	11,5
1974	649	76	8,5	532	25	21,3	386	48	8,0	133	9	14,8	625	57	11,0
1975	700	78	9,0	690	26	26,5	470	48	9,8	110	9	12,2	678	69	9,8
1976	825	82	10,1	751	29	25,9	611	51	12,0	183	8	22,9	738	69	10,7
1977	932	88	10,6	805	31	26,0	738	52	14,2	215	11	19,5	796	73	10,9
1978	1331	101	13,2	885	32	27,7	812	51	15,9	235	11	21,4	895	79	11,3
1979	1832	110	16,7	822	36	22,8	929	51	18,2	201	13	15,5	820	88	9,3
1980	1985	101	19,7	770	39	19,7	1055	50	21,1	162	10	16,2	903	105	8,6

(d) Declines in ratios were also evident in the Faculties of Education and Law.

The relationship between pass rates and success rates, and student-staff ratios will be studied later in this investigation.

With the study of student and staff growth at the University of Durban-Westville completed, the analysis that follows is that of the academic output of the University.

#### 3.4.6.3. Degrees, Diplomas and Certificates awarded by the University of Durban-Westville : 1963-1980

Table 3.17 shows the number of degrees, diplomas and certificates awarded by the University for the period 1963-1980.

TABLE 3.17

DEGREES, DIPLOMAS AND CERTIFICATES AWARDED BY THE UNIVERSITY OF DURBAN-WESTVILLE : 1963-1980

Year	Degree		Diplomas/Certificates		Total Awards
	No.	%	No.	%	No.
1963	9	90,0	1	10,0	10
1964	26	52,0	24	48,0	50
1965	71	68,3	33	31,7	104
1966	91	66,0	47	34,0	138
1967	127	57,5	94	42,5	221
1968	134	51,3	127	48,7	261
1969	170	61,4	107	38,6	277
1970	201	60,0	135	40,0	336
1971	162	67,8	77	32,2	239
1972	206	73,3	75	26,7	281
1973	217	67,0	107	33,0	324
1974	272	74,3	94	25,7	366
1975	288	75,4	94	24,6	382
1976	320	78,4	88	21,6	408
1977	366	74,4	126	25,6	492
1978	430	71,2	174	28,8	604
1979	528	74,1	185	25,9	713
1980	569	72,9	212	27,1	781
TOTAL	4187	69,9	1800	30,1	5987

Figure 3.12 illustrates graphically the awards by the University for the period 1963-1980.

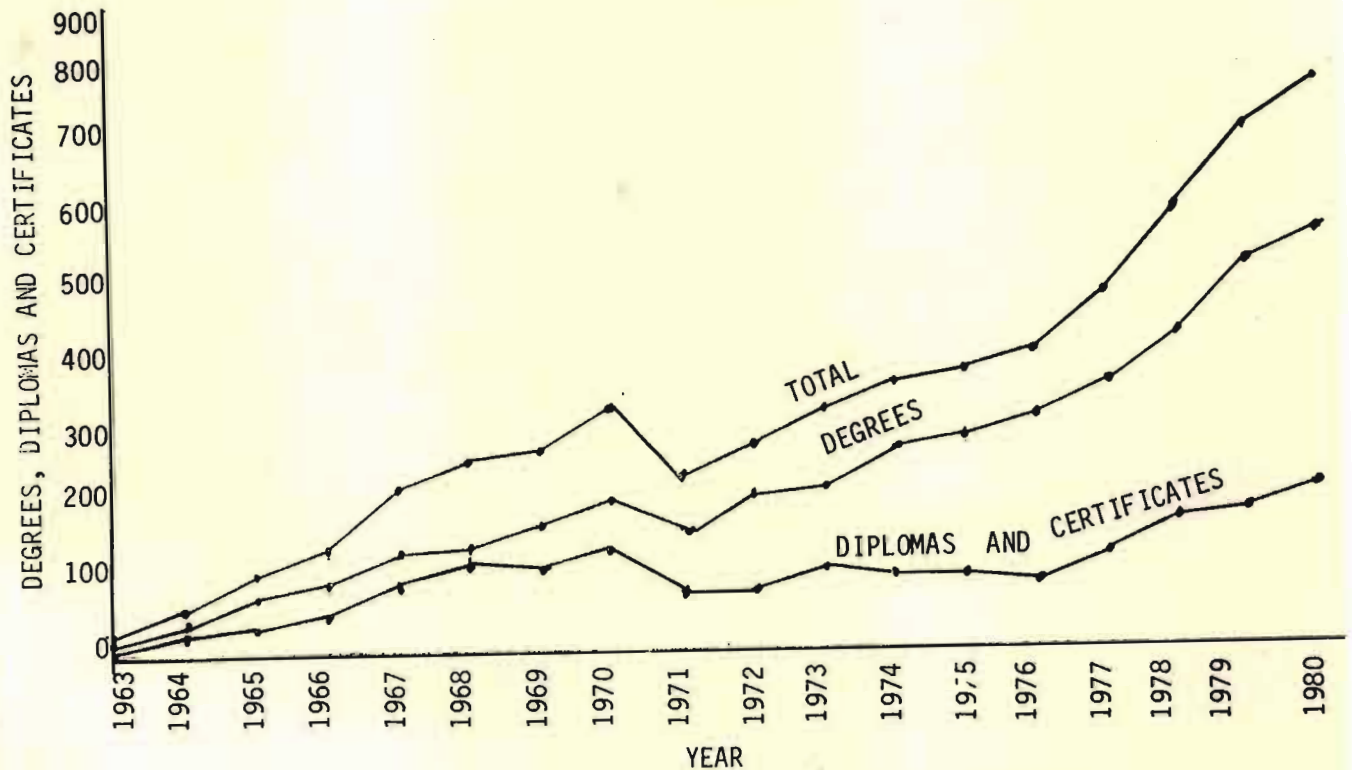


Fig. 3.12 DEGREES, DIPLOMAS AND CERTIFICATES AWARDED BY UD-W: 1963-1980

From Table 3.17 and Figure 3.12 the following evidence emerges:

- (a) Altogether 5987 degrees, diplomas and certificates were awarded during 1963-1980. Of these 4187 (69,9%) were degrees and 1800 (30,1%) diplomas and certificates.
- (b) After an initial sharp rise from 10 in 1963 to 104 in 1965, the total number of degrees, diplomas and certificates increased steadily to 336 in 1970. There was a marked decline in 1971 to 239. This resulted partly from the reduced number of awards in the Faculties of Education and Arts. (See Table 3.17). The decline in Education was due to a change from a 2-year Primary Teacher's Certificate to a



3-year Primary Teacher's Diploma. As from 1971, however, there was a steady growth up to the 1980 figure of 781 degrees, diplomas and certificates awarded.

- (c) While the number of degrees awarded has already exceeded that for diplomas and certificates, the percentage of degrees awarded during the sixties and early seventies was just over 60%. However, as from 1974, this figure increased to over 70%.
- (d) The number of diplomas and certificates awarded grew rapidly to an initial high of 135 in 1970 but declined to 75 in 1972 for reasons already stated. Since then there has been a recovery.

An analysis follows of the distributions of degrees, diplomas and certificates awarded on a Faculty basis. Table 3.18 (Page 81) contains the data.

Note: The degrees and diplomas awarded by the new Faculties of Health Sciences and Engineering for 1980 are included in the awards for the Science Faculty, while those of Theology are in the Faculty of Arts.

The following facts emerge from Table 3.18:

- (a) Of the 5987 degrees, diplomas and certificates awarded from 1963 to 1980

34,2% were awarded by the Arts Faculty,

33,6% by Education,

15,7% by Science,

13,6% by Commerce and

2,8% by Law

TABLE 5.10

DEGREES, DIPLOMAS AND CERTIFICATES AWARDED PER FACULTY AT THE UNIVERSITY OF DURBAN-WESTVILLE : 1963-1980

Year	FACULTY											Total
	Arts			Commerce			Education			Law	Science	
	Degree	Diploma	Total	Degree	Diploma	Total	Degree	Diploma	Total	Degree	Degree	
1963	3	0	3	0	0	0	0	1	1	0	6	10
1964	11	1	12	1	0	1	0	23	23	0	14	50
1965	31	0	31	4	1	5	6	32	38	0	30	104
1966	56	2	58	2	0	2	5	45	50	0	28	138
1967	86	3	89	3	1	4	8	90	98	0	30	221
1968	95	4	99	4	2	6	7	121	128	2	26	261
1969	118	3	121	7	2	9	12	102	114	1	32	277
1970	134	8	142	19	1	20	4	126	130	3	41	336
1971	89	9	98	17	2	19	7	66	73	5	44	239
1972	111	10	121	39	2	41	11	63	74	10	35	281
1973	77	6	83	54	4	58	11	97	108	13	62	324
1974	100	4	104	67	11	78	23	79	102	5	77	366
1975	106	4	110	68	15	83	26	75	101	5	83	382
1976	159	3	162	65	16	81	27	69	96	6	63	408
1977	150	3	153	85	15	100	41	108	149	17	73	492
1978	169	8	177	76	26	102	43	140	183	36	106	604
1979	224	7	231	84	15	99	89	163	252	40	91	713
1980	251	3	254	96	13	109	97	196	293	26	99	781
Total	1970	78	2048	691	126	817	417	1596	2013	169	940	5987
%	32,9	1,3	34,2	11,5	2,1	13,6	7,0	26,7	33,6	2,8	15,7	100

- (b) All Faculties except Arts showed a continuous increase in the number of students graduating over the period 1963-1980.
- (c) The number of graduates from the Arts Faculty decreased from 142 in 1970 to 98 in 1971 and even further to 83 in 1973. Since then there has been a continuous improvement.
- (d) The diplomas and certificates represented a declining proportion of the number of degrees, diplomas and certificates awarded annually : from over 40% in the sixties to under 30% in the seventies. The highest number of awards of diplomas and certificates was accounted for by the Faculty of Education with 88,7%; followed by Commerce with 7,0%; Arts with 4,3%. The Faculties of Law and Science award degrees only.
- (e) As far as degrees are concerned the percentage of awards on a Faculty basis were (in order of magnitude):

Arts	47,1%
Science	22,5%
Commerce	16,5%
Education	10,0%
Law	4,0%.

The Faculty of Arts has maintained a consistent output of graduates, but the Faculty of Science has been irregular. On the other hand the Faculties of Education and Commerce have shown encouraging growth in the numbers of degrees awarded. The Commerce Faculty has experienced heavy enrolments for its degrees in the last decade, while the increase in the Education Faculty resulted from increased enrolment for its new B.Paed degrees. As from 1977 the Faculties of Arts and Education experienced a major influx of teachers enrolling part-time, in order to improve



their qualifications.

Figure 3.13 shows graphically the total awards of each Faculty at the University for the period 1963-1980.

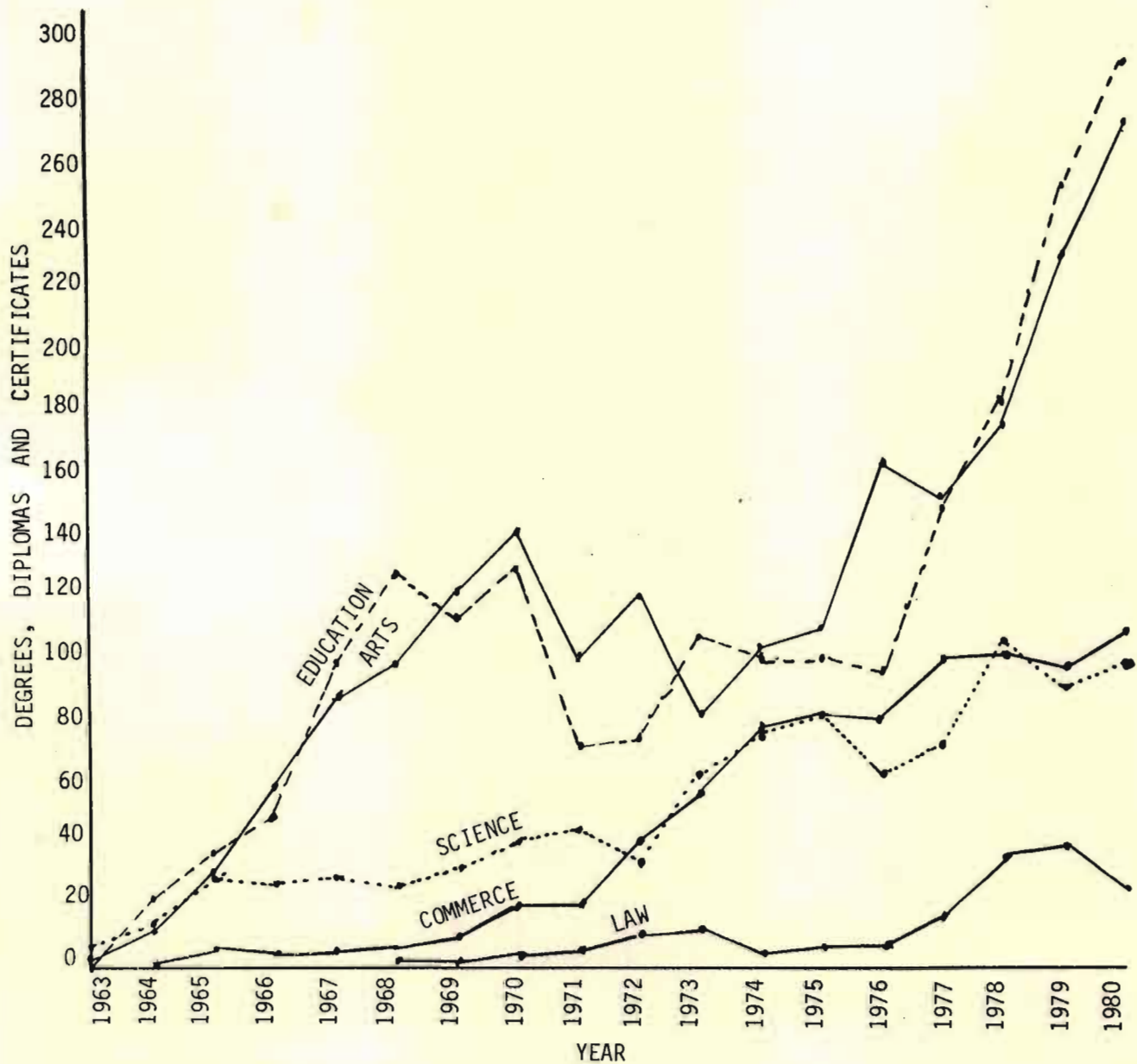


Fig. 3.13 DEGREES, DIPLOMAS AND CERTIFICATES AWARDED BY EACH FACULTY AT UD-W: 1963-1980

Figure 3.13 shows that:

- (a) the Faculties of Arts and Education have been in the forefront as regards the number of awards of degrees, diplomas and certificates,

- (b) the Faculties of Science and Commerce have been well behind,  
 (c) the Faculty of Law has been making the fewest awards.

Because one of the prime functions of a university is to prepare students for degrees, an analysis of degrees only was made on a Faculty basis. Fig. 3.14 shows graphically the degrees awarded by each Faculty for the period 1963-1980.

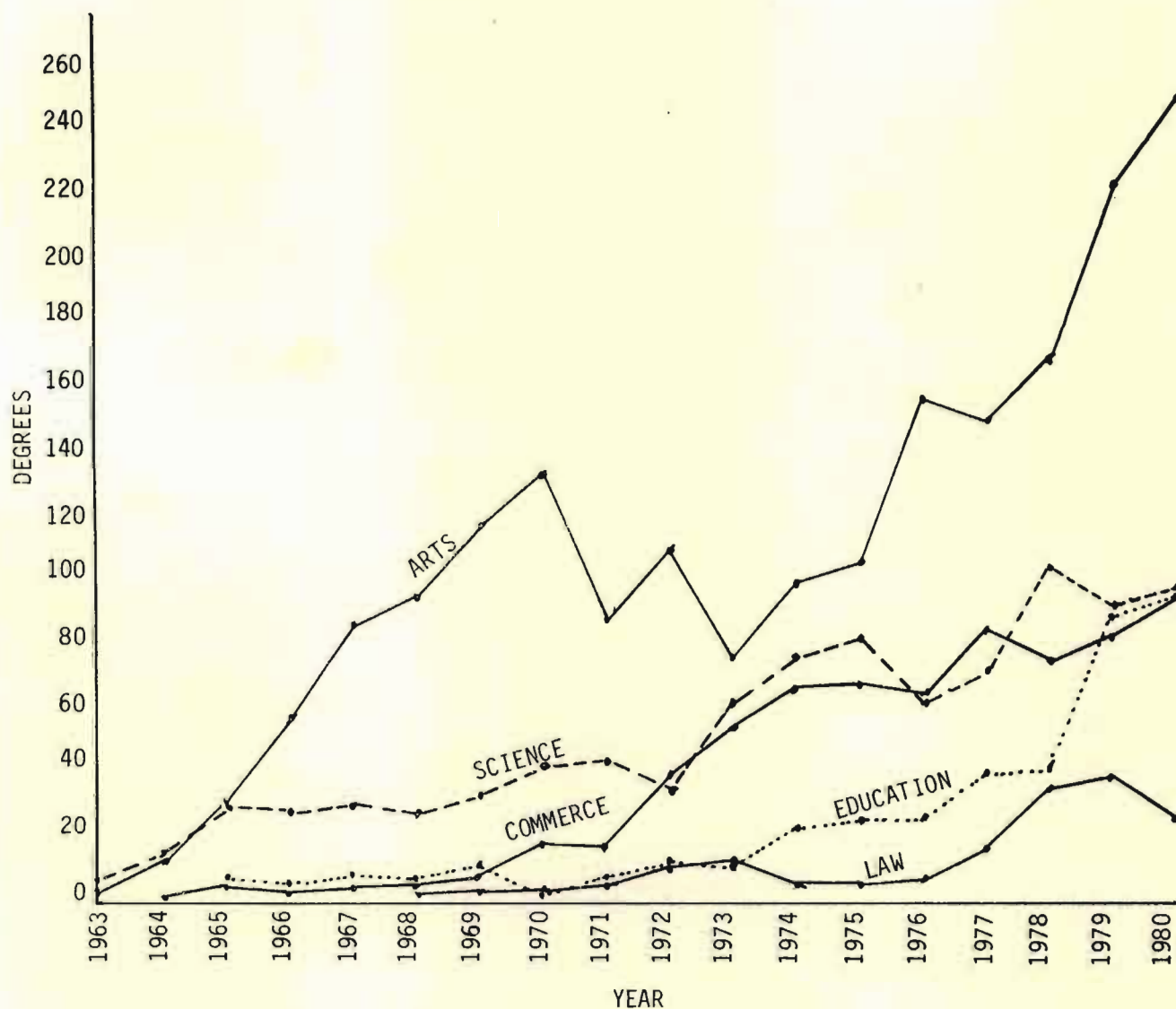


Fig. 3.14 DEGREES AWARDED BY EACH FACULTY AT UD-W: 1963-1980

Figure 3.14 shows that for degrees only:

- (a) the Arts Faculty was the biggest contributor, with the Science and

- Commerce Faculties close together but well behind Arts,
- (b) the Education Faculty which, for many years prepared post graduate students only for degrees, showed a marked increase in degrees awarded since the inception of the B.Paed degree,
- (c) Law graduates have been few.

Table 3.19 shows a comparison of the awards to Indian students by the University of Durban-Westville, Unisa and the White residential universities. This was done mainly to obtain a perspective of the contributions of these three institutions to the number of Indian graduates.

TABLE 3.19

PERCENTAGE AWARDS TO INDIANS BY THE UNIVERSITY OF DURBAN-WESTVILLE, UNISA AND THE WHITE RESIDENTIAL UNIVERSITIES : 1970-1978

	1970	1971	1972	1973	1974	1975	1976	1977	1978
	%	%	%	%	%	%	%	%	%
University of Durban-Westville	69,3	54,1	59,0	59,7	61,1	57,6	55,3	54,5	54,2
White Residential Universities	16,5	24,2	21,8	19,9	19,7	20,7	16,9	15,8	18,0
Unisa	14,2	21,7	19,1	20,4	19,2	21,7	27,8	29,6	27,8
Total (%)	100	100	100	100	100	100	100	100	100
Total (Actual Numbers)	(485)	(442)	(476)	(543)	(599)	(663)	(740)	(902)	(1113)

The following observations and inferences are made from Table 3.19:

- (a) The percentage of graduates for the period 1970-1978 from the three institutions was as follows:



- (i) University of Durban-Westville 57,6%, with a range of 54,2% to 69,3%;
  - (ii) White residential universities 23,6% with a range of 15,8% to 24,2%;
  - (iii) Unisa 18,8% with a range of 14,2% to 29,6%.
- (b) While all three institutions showed increases in the number of students who graduated, the proportions of students graduating in each year from each "university" fluctuated.
- (c) While the number of University of Durban-Westville graduates increased from 336 in 1970 to 604 in 1978, its percentage of the total Indian graduates per year decreased from 69,3% in 1970 to 54,2% in 1978. On the other hand, Unisa and the White residential universities showed increases - especially Unisa whose awards increased from 14,2% in 1970 to 27,8% in 1978.

It will not be in the interests of the University of Durban-Westville to allow the decline in the percentage of students graduating to continue unchecked. As the only residential university for Indian students, it has a duty to investigate those parts of its system that concern the selection, teaching, examination and graduation of its students.

### 3.5 SUMMARY

The Indian population had shown a continuous, positive growth rate for the period 1950-1977, but there has been a decline in the birth rate as from 1972. The total Indian school population had also shown a continuous, positive growth rate over the period 1968-1978, but the standard ten enrolment has been erratic - its growth rate being positive in some years and negative in others. This fluctuation is of concern to the universities as it affects the number matriculating and entering

university. Another adverse feature of Indian school education is that only 31,2% of those passing standard ten obtain matriculation exemption certificates. Even more disturbing is the fact that only 20,2% of an age group passes standard ten, as compared with 87,2% for Whites in South Africa.

In spite of these restrictive factors the university enrolment of Indian students has maintained an average annual growth rate of 11,3% over the period 1964-1978. However, the percentage of the Indian population at residential universities in 1977 was very low : 0,6%. This compared unfavourably with the 1,75% for White South Africans. Nearly 45% of the total Indian university students in 1978 had enrolled at the University of Durban-Westville, about 40% at Unisa and 1,5% at the White residential universities.

The enrolment at the University of Durban-Westville increased rapidly from 111 in 1961 to 4201 in 1978. Today (1980) the University is a large one by South African standards. Most of its students are full-time: 75%. The male-female ratio is about 2:1; but the female enrolment has shown significant growth. Up to 1979 the University comprised five Faculties but in 1980 the number increased to eight. The student-staff ratio deteriorated from 1:10 in the sixties to 1:15 in the seventies. The Faculties of Science and Arts had more favourable student-staff ratios than the others.

Over the period 1968-1980 about 70% of the awards made by the University of Durban-Westville were degrees and about 30% diplomas. The number of awards increased from 11 in 1963 to 781 in 1980. The Faculties of Arts and Education each contributed about 33% of the awards, the Faculties of Science and Commerce about 15% each and Law less than 3%.

Of the total number of degrees, diplomas and certificates awarded to Indians by all South African universities for the period 1970-1978, the University of Durban-Westville had made 57,6%, Unisa 18,8% and the White universities 23,6%. However, what is of concern to the University of Durban-Westville is that, while the percentages of the total awards made by it have shown a decline, those of the other two had increased.



## CHAPTER FOUR

### 4. PASS RATES AND SUCCESS RATES AT THE UNIVERSITY OF DURBAN-WESTVILLE

In this chapter the methods of calculating the pass rates and success rates at universities are described. This is followed by the calculations of these rates for the University of Durban-Westville and for Indian students at White residential universities. For the University of Durban-Westville, the calculations were also made on a Faculty basis, and separately for degrees and diplomas. Comparisons of academic performance at the University of Durban-Westville are made with those of Indian students at White residential universities as well as with White students at those universities.

#### 4.1. PASS RATES OF FIRST-YEAR STUDENTS

The pass rate is defined as the percentage of first-year students who gain promotion to the second year of study.

##### 4.1.1. Method of Calculating the Pass Rate

A variety of methods is described by Louw (1978), of the CUP secretariat, for calculating pass rates at universities. The method chosen for this research is the one used by the CUP in 1977 to calculate the pass rates at White universities. In this method the pass rate is obtained from the formula:

The number of students promoted to the second year, divided by the number of students registered in the first year on the first Tuesday in June of the relevant year (Erens and Louw, 1978, 43). The CUP calculations covered the period 1959 to 1967 for which the pass rate values for all South African White universities averaged 60,8% with a range of 59% to 63%.

For promotion from first year to second year at the University of Durban-

Westville, all Faculties, except Commerce, required a pass in at least three first-year subjects. The Commerce Faculty required a pass rate in at least two first-year subjects.

In view of the fact that the University of Durban-Westville was established in 1961 it was decided that the seventies were more suitable than the sixties for meaningful inquiry and comparison. The period selected for the study and computation of pass rates was 1971 to 1976. This also happens to be the period selected for the longitudinal study that begins in Chapter Five.

In the calculation of pass rates, the number of first-year students included those who were repeating first-year. This was done so that comparisons could be made with calculations by the CUP who included repeats in the count for the White residential universities.

#### 4.1.2. Pass Rates for the University of Durban-Westville and for White residential universities

The CUP calculated pass rates from 1959 to 1967 for first-year students reading for a bachelor's degree. The calculations for first-year students at the University of Durban-Westville were for:

- (a) all the students, i.e., degree and diploma students;
- (b) bachelor's degree students;
- (c) diploma students.

##### 4.1.2.1. Pass Rates for all students (Degree and Diploma)

Table 4.1 (Page 91) presents first-year passes and pass rates for the University of Durban-Westville for the period 1971-1976.

TABLE 4.1

PASS RATES OF FIRST-YEAR STUDENTS AT THE UNIVERSITY OF DURBAN-WESTVILLE :  
DEGREES AND DIPLOMAS; 1971-1976

Year	First-Year Passes	Total First-Year Students	Pass Rates
	Number	Number	%
1971	391	770	50,8
1972	467	894	52,2
1973	538	1004	53,6
1974	606	1108	54,7
1975	685	1187	57,7
1976	763	1454	52,5
Total	3450	6417	53,8
Simple Mean (Mean of Yearly Values)			53,6

According to Table 4.1:

- (a) the pass rate improved steadily from 50,8% in 1971 to 57,7% in 1975;
- (b) a decline was noted in 1976 when the pass rate was 52,5%;
- (c) the average pass rate for 1971-1976 was 53,8%.

The year 1976 was one of marked increase in first-year enrolment as more students matriculated than previously (See Table 3.4, Chapter Three). This was partly the result of the differentiated four-phase system of school education which introduced a choice of subjects for matriculation at standard or higher grades and revised the examination requirements for a pass with matriculation exemption.

The pass rate at the University of Durban-Westville is now compared with that of Indian students at White residential universities whose promotion



data were extracted from the annual reports of the Department of National Education (Department of National Education Reports : 1972-1977).

Table 4.2 shows the distribution of passes and the pass rates of Indian students at White residential universities for the period 1971-1976 for degrees and diplomas.

TABLE 4.2

FIRST-YEAR PASSES AND PASS RATES FOR INDIAN STUDENTS AT WHITE RESIDENTIAL UNIVERSITIES : DEGREES AND DIPLOMAS; 1971-1976

Year	First-Year Passes	Total First-Year Students	Pass Rate (%)
	Number	Number	
1971	114	233	48,9
1972	110	183	60,1
1973	134	225	59,6
1974	103	170	60,6
1975	99	168	58,9
1976	118	191	61,8
Total	678	1170	57,9
Simple Mean (Mean of Yearly Values)			58,3

Table 4.2 shows that:

- (a) as from 1972 the annual pass rate was consistent, being about 60%;
- (b) Indian students at White residential universities had a higher pass rate (57,9%) than students at the University of Durban-Westville (53,8%).

Table 4.3 (Page 93) shows the distribution of passes and failures among

first-year Indian students at White residential universities and at the University of Durban-Westville.

TABLE 4.3

FIRST-YEAR PASSES AND FAILURES AMONG INDIAN STUDENTS AT (a) WHITE RESIDENTIAL UNIVERSITIES AND (b) THE UNIVERSITY OF DURBAN-WESTVILLE; FOR THE PERIOD 1971-1976

	First-Year Passes		First-Year Failures	
	No	%	No	%
(a) White Residential Universities	678	57,9	492	42,1
(b) University of Durban-Westville	3450	53,8	2967	46,2

Table 4.3 reveals that Indian students at White residential universities had superior first-year pass rates (57,9%) compared with students at the University of Durban-Westville (53,8%). The above distribution was subjected to a  $\chi^2$  test and a value of 6,99 was obtained ( $p < 0,01$ ). Therefore Indian students at White residential universities had significantly higher pass rates in their first year than Indian students at the University of Durban-Westville.

For the period 1971-1976, the University of Durban-Westville was able to promote 53,6% (simple mean) of all its first year students. This figure of 53,6% cannot be compared directly with the 60,8% (simple mean) for White students at residential universities, as the latter is for Bachelor degree students only. (Simple means only are available for White universities. Therefore comparisons with the University of Durban-Westville were made with these alone).

To facilitate valid comparisons, pass rate for Bachelor degree students at the University of Durban-Westville were calculated.

4.1.2.2. Pass Rates for First-year Degree Students at the University of Durban-Westville

Table 4.4 shows the distribution of passes and pass rates of first-year degree students at the University of Durban-Westville for the period 1971-1976.

TABLE 4.4

FIRST YEAR PASSES AND PASS RATES(%) FOR BACHELOR DEGREE STUDENTS AT THE UNIVERSITY OF DURBAN-WESTVILLE : 1971-1976

Year	First-Year Passes	Total First-Year Students	Pass Rate
	Number	Number	%
1971	338	703	48,1
1972	403	810	49,8
1973	483	924	52,3
1974	505	944	53,5
1975	554	1009	54,9
1976	635	1198	53,0
Total	2918	5588	52,2
Simple Mean (Mean of Yearly Values)			51,9

The following observations are made from Table 4.4:

- (a) The pass rates for Bachelor degree students showed that the University of Durban-Westville was consistent in promoting about 50% of its first-year degree students.
- (b) However, the mean pass rate of 51,9% (simple mean) did not compare



favourably with that of 60,8% (simple mean) for the White universities.

Table 4.5 shows the distribution of passes and pass rates for Bachelor degree Indian students at White residential universities.

TABLE 4.5

PASSES AND PASS RATES FOR INDIAN BACHELOR DEGREE STUDENTS AT WHITE RESIDENTIAL UNIVERSITIES : 1971-1976

Year	First-Year Passes	Total First-Year Students	Pass Rate
	Number	Number	%
1971	113	230	49,1
1972	100	168	59,5
1973	134	222	60,4
1974	102	168	60,7
1975	99	166	59,6
1976	112	178	62,9
Total	660	1132	58,3
Simple Mean (Mean of Yearly Values)			58,7

According to Table 4.5:

- (a) the pass rate per annum was around 60%;
- (b) the mean pass rate of 58,3% for Indian first-year degree students at White residential universities was higher than that of 53,2% for the University of Durban-Westville.

The pass rates of Indian students at the University of Durban-Westville and the White residential universities are illustrated graphically in figure 4.1 (Page 96).

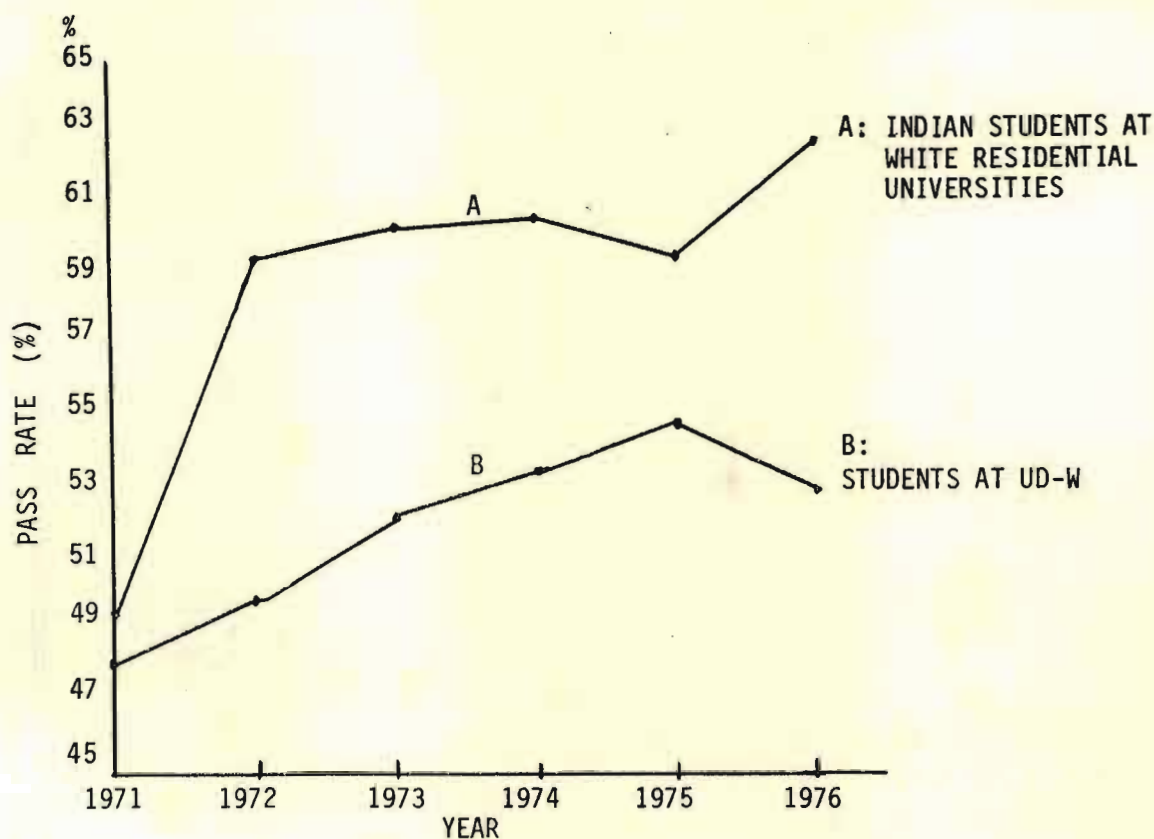


Fig. 4.1 PASS RATES OF INDIAN STUDENTS AT UD-W AND THE WHITE RESIDENTIAL UNIVERSITIES: 1971-1976

Fig. 4.1 illustrates clearly:

- (i) the superior pass rates of Indian students at White residential universities; and
- (ii) the changes in the pass rates for 1976 when a considerably larger number of standard ten candidates passed with matriculation exemption certificates. Whereas the pass rate at the White residential universities rose sharply in 1976, that at the University of Durban-Westville showed a decline.

The differences in the pass rates of first-year Indian students at White residential universities and the University of Durban-Westville were subjected to a  $\chi^2$  test and a value of 14,00 was obtained ( $p < 0,001$ ).

Therefore Indian students at White residential universities were achieving

a significantly higher pass rate than their counterparts at the University of Durban-Westville.

It must be pointed out also that while 60,8% was the mean first-year pass rate for White students at residential universities, the mean value for individual universities for the period 1959-1967, ranged from 54,11% for Pretoria University to 76,11% for the University of Orange Free State. (Appendix 5, p. 389, contains first-year pass rates for White residential universities for the period 1959-1967). The pass rate of 51,9% for the University of Durban-Westville for the period 1971-1976 is lower than the lowest pass rate for individual White universities for the period 1959-1967. The University of Durban-Westville's figure makes even poorer comparison with the improved pass rates of the White universities in the seventies - as implied by the success rates in Section 4.2 of this chapter.

The pass rate difference is sufficiently large to make the authorities at the University of Durban-Westville take serious cognizance of it. A considerable amount of man-power and resources is being wasted.

#### 4.1.2.3. Pass Rates For Diploma Students

Table 4.6 (page 97) shows the first-year passes and pass rates of diploma students at the University of Durban-Westville for 1971-1976.

The following observations and inferences are made from Table 4.6:

- (a) The pass rates for the diploma students ranged from 50% in 1976 to 79,1% in 1971, with a mean of 64,2% which is considerably higher than the mean pass rate of 52,3% for first-year degree students.
- (b) The mean for the diplomas for 1971-1975 was a high 70,5%. The large decrease in the pass rate from 73,6% in 1975 to 50,0% in 1976 caused the decline in the average for 1971-1976 to 64,2%. The low value



TABLE 4.6

FIRST-YEAR PASSES AND PASS RATES ACCORDING TO FACULTY FOR DIPLOMA STUDENTS  
AT THE UNIVERSITY OF DURBAN-WESTVILLE : 1971-1976

Year	Pass Rate Per Faculty			First-Year		
	Arts	Commerce	Education	Number of Passes	Number of Students	Pass Rate (%)
	Pass Rate (%)	Pass Rate (%)	Pass Rate (%)			
1971	80,0	50,0	83,7	53	67	79,1
1972	71,4	83,3	76,1	64	84	76,2
1973	40,0	76,2	71,4	55	80	68,8
1974	30,0	59,6	65,4	101	164	61,6
1975	57,1	52,1	82,9	131	178	73,6
1976	17,7	35,7	67,4	128	256	50,0
Total	36,0	51,5	73,5	532	829	64,2

of 50,0% for 1976 was the result mainly of the low pass rates among the Arts (17,7%) and Commerce (35,7%) students, while Education maintained its high pass rate with 67,4%. The high failure rate in Arts was amongst students taking the lower Diploma in Library Science; while in Commerce it was in the Diploma in Public Administration. The year 1976 witnessed an unusually heavy enrolment for these two diplomas.

#### 4.1.2.4. Pass Rates per Faculty at the University of Durban-Westville and at the White residential universities

The CUP calculated first-year pass rates of Bachelor degree students in five fields of study: Arts, Commerce, Science, Engineering and Medicine. The University of Durban-Westville does not offer medicine; while Engineering, with a very small enrolment, was offered in the Science Faculty. It was decided to make comparisons wherever possible, between the University of

Durban-Westville Faculty results and those published by the CUP for White students. However, it was not possible to calculate the University of Durban-Westville pass rates for each Faculty in each of the years for 1971-1976, because data for the years 1971, 1973, 1975 and 1976 were not recorded by the Administration on a Faculty basis. It was possible, however, to calculate pass rates for first-year degree students for the years 1972 and 1974. These are compared with the data for White universities for 1967 which was the latest year for which such data were available. See Table 4.7.

TABLE 4.7

PASS RATES FOR THE UNIVERSITY OF DURBAN-WESTVILLE AND WHITE RESIDENTIAL UNIVERSITIES : DEGREES

University	Year	Pass Rates Per Faculty		
		Arts	Commerce	Science
White Residential Universities	1967	70% (Mean for the period 1959-1967 was 71%)	56% (Mean for the period 1959-1967 was 54%)	56% (Mean for the period 1959-1967 was 58%)
University of Durban-Westville	1972	58,4%	80,4%	31,4%
	1974	57,9%	80,2%	38,3%

The following observations are made from Table 4.7:

- (a) The pass rates in Arts and Science for the University of Durban-Westville were much lower than those of the White universities, especially so in Science.
- (b) The high 80,6% pass rate for Commerce at the University of Durban-Westville was the result mainly of the fact that a student in that Faculty had to obtain passes in at least two subjects in the first



year for promotion to the second year, while the other Faculties required passes in at least three subjects.

The performances of first-year Indian degree students at the University of Durban-Westville and Indian students at White residential universities were compared on a Faculty basis. Table 4.8 shows the promotion rates of Indian degree students at the University of Durban-Westville and Indian students at the White residential universities for the Faculties indicated and for the years 1972 and 1974.

TABLE 4.8

MEAN DEGREE PASS RATES OF INDIAN STUDENTS ACCORDING TO FACULTY AT WHITE RESIDENTIAL UNIVERSITIES AND AT THE UNIVERSITY OF DURBAN-WESTVILLE.

Year	First Year Student Group	Pass Rate Per Faculty (%)		
		Arts	Commerce	Science
1972	University of Durban-Westville	58,4%	80,4%	31,4%
1972	White Residential Universities	46,2%	64,9%	33,3%
1974	University of Durban-Westville	57,9%	80,7%	38,3%
1974	White Residential Universities	37,5%	46,2%	41,9%
1970 - 1978	White Residential Universities (Mean)	48,5%	55,2%	47,9%

Table 4.8 reveals the following:

- (a) Arts students at the University of Durban-Westville were more successful than Indian students in the Arts Faculty at White residential universities.
- (b) For Science, however, the position was reversed, although the



differences were smaller.

- (c) Not much could be read into the differences in Commerce for reasons already mentioned.

#### 4.2. The Success Rate at the University of Durban-Westville

While the pass rate deals with students passing or failing the first year at university, the success rate concerns graduating or not graduating, i.e., the students's entire stay at university for the first degree or diploma he or she has enrolled for, is involved. The success rate is defined as the percentage of first-year students enrolling in a particular year that eventually graduate. The method used to calculate the success rate is the flow model.

##### 4.2.1. Flow Model Calculation of Success Rate

One design often used to study success rates at university is the longitudinal one. In this design students entering university in a given year are "tagged" and followed from year to year until they graduate or drop out. This allows calculations, *inter alia*, of

- (a) the percentage of students graduating,
- (b) the percentage graduating in minimum time,
- (c) the percentage that drop out, and
- (d) the time of drop out.

The first longitudinal study undertaken in South Africa was by Steyn (1963) for the Joint Matriculation Board. The results of three successive years were analysed and average values were calculated for the period 1954-1957. Further study of this nature has not been undertaken in South Africa. As pointed out earlier (Chapter 2) they are exhaustive and expensive undertakings. The CUP conducted a partly longitudinal study for the

White universities using the flow model method. This method is based on the premise that in a no-growth situation, i.e., when the intake of new first-year students remain constant in number and academic achievement, the success rate is determined by dividing the number of graduates (degrees and diplomas) in any year by the number of new first-year registrations.

If the new enrolment grows annually then a more sophisticated calculation must be done. The CUP secretariat describes the procedures as follows: In a growth situation, one starts from an initial year and counts the number of three-year degrees awarded three years later, the number of four-year degrees awarded four years later, and so on, until all the degrees are accounted for. The same applies to the diplomas and certificates. The total number of students who graduated, divided by the number of new first-year students in the initial year, gives the success rate for the initial year.

If all graduates complete their degrees in minimum time, the success rate calculated is correct, if not, it is an estimate, but a very good one since, although a number of persons of the initial years are not included in the count, a number who are from an earlier intake, are included. To a great extent these two errors compensate each other, especially if the growth rate of new enrolment does not show excessive variation. The major advantage of this computation is that the measure of success used is straightforward, i.e., graduated or not graduated, and no confusion can arise in this regard. And as the primary object of a university is to enable the student it enrolls to graduate, the advantages are clear (Erens and Louw, 1978, 47).

#### 4.2.2. Success Rate Calculations for the University of Durban-Westville

To enable meaningful comparisons to be made with White universities in South Africa the procedures in the flow model calculations in this research were identical to those used by the CUP in their investigations in the White universities.

The success rate for the University of Durban-Westville was calculated for each year from 1961, when the University was established, to 1977.

The number of the new first-year intake of each year as well as the number of students obtaining degrees, diplomas and certificates each year, were extracted from the records of the Administration section of the University of Durban-Westville. The awards made over the period 1961-1977 were counted separately for (a) Diplomas (including Certificates) and (b) Degrees.

Diplomas (and Certificates) comprised three sub-groups:

Two-year Diplomas (and Certificates):

Certificate in Theology,

Diploma in Commerce,

Lower Diploma in Public Administration,

Primary Teacher's Certificate.

The following undergraduate diplomas and certificates which the CUP included in their calculations were also added to the two-year diploma count:

Certificate in Remedial Education,

Diploma for Teachers of Deaf and Hard of Hearing,

Diploma in the Teaching of Physiotherapy,

Diploma in Special Education.



Three-year Diplomas (and Certificates):

Certificate in Theology (introduced in 1976),  
 Diploma in Fine Arts,  
 Diploma in Social Science,  
 Higher Certificate in Theology,  
 Higher Primary Teacher's Diploma,  
 Junior Secondary Teacher's Diploma,  
 Primary Teacher's Diploma,  
 University Diploma in Education - Junior Secondary,  
 University Diploma in Education - Senior Primary,  
 University Education Diploma - non-graduate.

Five-year Diplomas/Certificates:

Here the  
 Diploma in Accountancy and the  
 Certificate in the Theory of Accountancy (CTA),  
 (the latter was replaced by the former) are included, as was the case  
 in the CUP investigation.

Degrees were counted in four groups:

Three-year Degrees:

Bachelor of Administration,  
 Bachelor of Arts,  
 Bachelor of Arts : Law,  
 Bachelor of Arts : Physical Education,  
 Bachelor of Arts : Social Science,  
 Bachelor of Commerce,  
 Baccalaureus Iuris,  
 Bachelor of Science.

Four-year degrees:

Bachelor of Arts : Fine Arts,  
 Bachelor of Arts : Social Work,  
 Bachelor of Business Science,  
 Bachelor in Library Science,  
 Bachelor of Paedagogics,  
 Bachelor of Pharmacy,  
 Baccalaureus Procurationis,  
 Bachelor of Science : Physiotherapy.

Five-year degrees:

Bachelor of Accounting,  
 Bachelor of Science : Pharmacy.

Six-year degrees:

Bachelor of Engineering

Table 4.9 (p. 106) shows the awards and success rates of the University of Durban-Westville for the period 1961-1977.

(Appendix 6, p. 390 shows the number of degrees and diplomas - including certificates - awarded two years, three years, four years, five years and six years after registration of new first-year students for the period 1961-1977. Data are given separately for degrees, diplomas, males, females and total).

The following observations are made from Table 4.9:

- (a) The success rate at the University of Durban-Westville grew rapidly from a very low 8,8% in 1961 to an impressive 78,6% in 1968.
- (b) There was a disastrous drop to 40,4% in 1969 and although the success rate recovered to 61,3% in 1970, it has shown a gradual decline since then.
- (c) The mean success rate for the period 1961 to 1977 was 45,6%.
- (d) If one ignores the initial years 1961 to 1964 when the University of Durban-Westville was still finding its feet as a tertiary

TABLE 4.9

DEGREES AND DIPLOMAS (INCLUDING CERTIFICATES) OBTAINED BY NEW FIRST-YEAR STUDENTS AND THE PERCENTAGE SUCCESS ACHIEVED BY EACH COHORT : UNIVERSITY OF DURBAN-WESTVILLE; 1961-1976

Year	New First-Year Students	No. of Diplomas Awarded	No. of Degrees Awarded	Total Awards Degrees and Diplomas	Success Rate %
1961	114	1	9	10	8,8
1962	366	20	25	45	12,3
1963	372	20	65	85	22,8
1964	431	31	78	109	25,3
1965	389	89	105	194	49,9
1966	325	73	118	191	58,8
1967	395	92	158	250	63,3
1968	318	99	151	250	78,6
1969	503	76	127	203	40,4
1970	403	67	180	247	61,3
1971	429	68	190	258	60,1
1972	625	63	238	301	48,2
1973	649	63	252	315	48,5
1974	821	81	273	354	43,1
1975	854	102	314	416	48,7
1976	1187	121	370	491	41,4
1977	1142	112	423	535	46,8

institution, the mean success rate for the period 1965 to 1977 was 49,8%.

The success rates at the University of Durban-Westville are compared with those of the White residential universities. These rates appear in Table 4.10.



TABLE 4.10

SUCCESS RATES AT THE UNIVERSITY OF DURBAN-WESTVILLE AND AT THE WHITE RESIDENTIAL UNIVERSITIES : DEGREES, DIPLOMAS AND CERTIFICATES; 1961-1975

Year	Success Rate at the University of Durban-Westville	Success Rate at White Residential Universities
1961	8,8	58
1962	12,3	78
1963	22,8	62
1964	25,3	68
1965	49,9	60
1966	58,8	59
1967	63,3	69
1968	78,6	68
1969	40,4	75
1970	61,3	62
1971	60,1	66
1972	48,2	65
1973	48,5	65
1974	43,1	62
1975	48,7	68

The following observations and inferences flow from Table 4.10:

- (a) The success rates at White residential universities ranged from 58% to 75%.
- (b) The average success rate for the period 1961-1975 was 65% for White students.
- (c) The mean success rate of 65% at White residential universities was

considerably higher than the mean of 45,6% for the University of Durban-Westville for the period 1961-1975, and 49,8% for the period 1965-1975.

- (d) An aggravating feature was that while the success rates at White universities had been stable since 1970 those at the University of Durban-Westville had shown a decline. This is illustrated graphically in figure 4.2

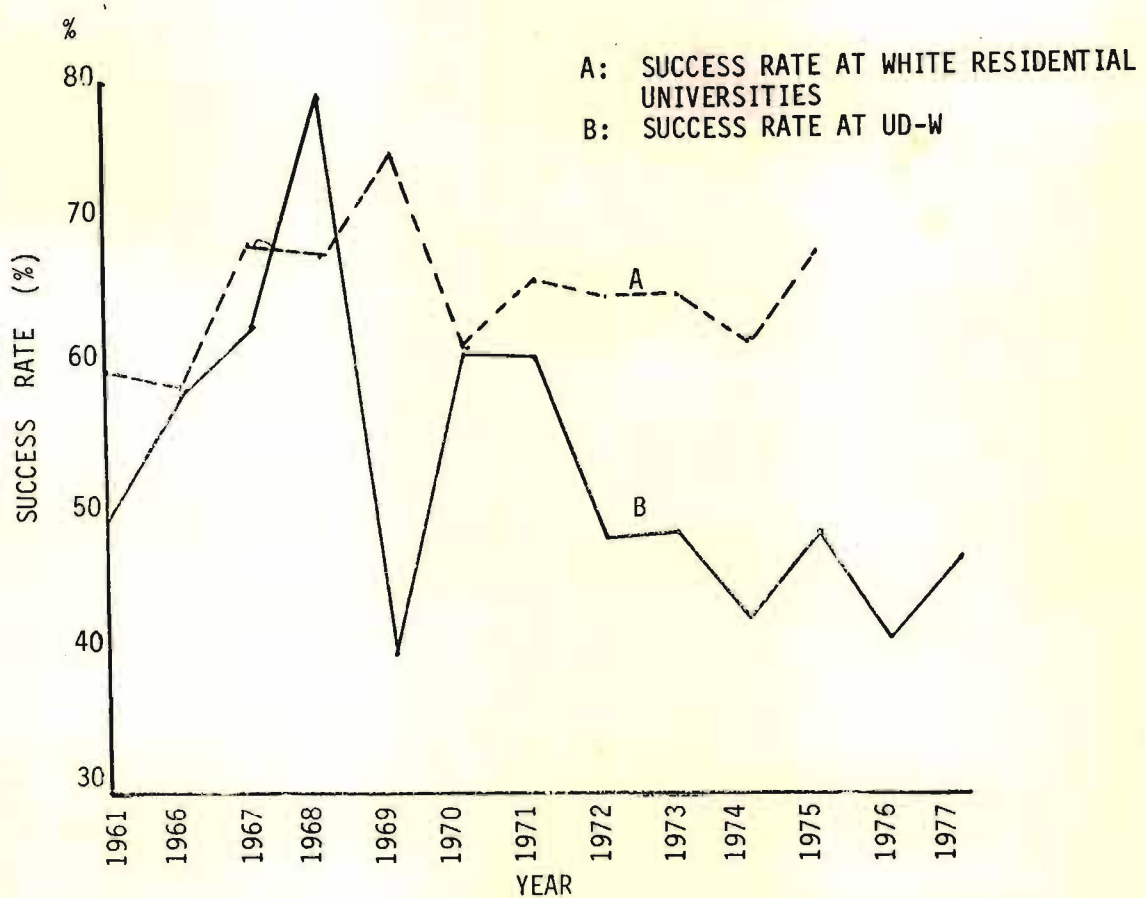


Fig. 4.2 SUCCESS RATES OF INDIAN FIRST-YEAR STUDENTS AT UD-W (1961-1977) AND WHITE FIRST-YEAR STUDENTS AT WHITE RESIDENTIAL UNIVERSITIES (1961-1975)

Fig. 4.2 illustrates clearly:

- (i) the considerable disparity in the success rates between the University of Durban-Westville and the White residential

universities, and

(ii) the widening gap between the two success rates especially since 1971.

(e) The following statistics amplify the preceding conclusions:

While the average success rate of the White universities increased over the three successive seven-year periods 1955-1961; 1962-1968; 1969-1975; from 56% to 66% to 67% for the respective periods, the success rate at the University of Durban-Westville decreased.

The figures were 52,2% and 46,8% respectively for the seven-year periods 1964-1970 and 1971-1977.

The White universities were able to increase their success rate over the fifteen-year period in spite of increased enrolment.

Success rates at universities in the United Kingdom have shown the same trends as those of White universities in South Africa. The Robbins Report on Higher Education in Great Britain (1963, 53) reported that students expansion in universities was not accompanied by reduced academic performance but rather the reverse. Increases in enrolment were not accompanied by increases in wastage, and the intellectual capacity of students was as high as ever. At the University of Durban-Westville the success rates were not only very low but were also declining while student enrolment was increasing. These are matters for both considerable concern and urgent investigation.

Table 4.11 (Page 110) shows the total first-year new enrolments at the University of Durban-Westville for the period 1965-1975 and the success rate, i.e., the percentage graduating.



TABLE 4.11

PERCENTAGE OF NEW ENROLMENTS GRADUATING AT THE UNIVERSITY OF DURBAN-WESTVILLE AND WHITE RESIDENTIAL UNIVERSITIES : 1965-1979

	First Year Enrolment	Graduates	
	Number	No.	%
University of Durban-Westville	5711	2979	52,2
White Residential Universities	144502	94196	65,2

The following observations and inferences are made from Table 4.11:

- (a) A far greater proportion of White students graduated (65,2%) than did Indian students at the University of Durban-Westville (52,2%)
- (b) A  $\chi^2$  was computed for the above distribution and a value of 407,99 was obtained ( $p < 0,01$ ). Therefore a highly significant difference existed between the proportions graduating at these universities, with the University of Durban-Westville producing a significantly lower success rate than the White residential universities.

Another conspicuous feature of the success rate (see fig. 4.1) was the amount of fluctuation in the success rates from time to time. The CUP, in their calculations found a similar phenomenon. In order to account for these fluctuations the CUP compared the success rate for each year with the percentage increase in the new first-year intake with respect to those of the previous year. It was found that the two were closely related: the relationship being that large positive growths in enrolment had an adverse effect on the success rate. On the other hand a negative growth, i.e., a decrease in enrolment, had a pronounced favourable effect on the success rate (Erens and Louw, 1978, 49). Calculations were made with the data for the University of Durban-Westville to see if

a similar situation existed. Table 4.12 shows computations that were made for the period 1963 to 1977 of the growth rates of successive first-year students at the University of Durban-Westville.

TABLE 4.12

FIRST-YEAR STUDENTS AT THE UNIVERSITY OF DURBAN-WESTVILLE AND THE GROWTH RATE

Year	Total First-Year Students	Growth Rate (%)	Success Rate (%)
1965	389	-9,7	49,9
1966	325	-16,5	53,8
1967	395	21,5	63,3
1968	318	-19,5	78,6
1969	503	58,2	40,4
1970	403	-19,9	61,3
1971	429	6,5	60,1
1972	625	45,7	48,2
1973	649	3,8	48,5
1974	821	26,5	43,1
1975	854	4,0	48,7
1976	1187	39,0	41,4
1977	1142	-3,8	46,8

The data in Table 4.12 are reflected graphically in Figure 4.3 (Page 112).

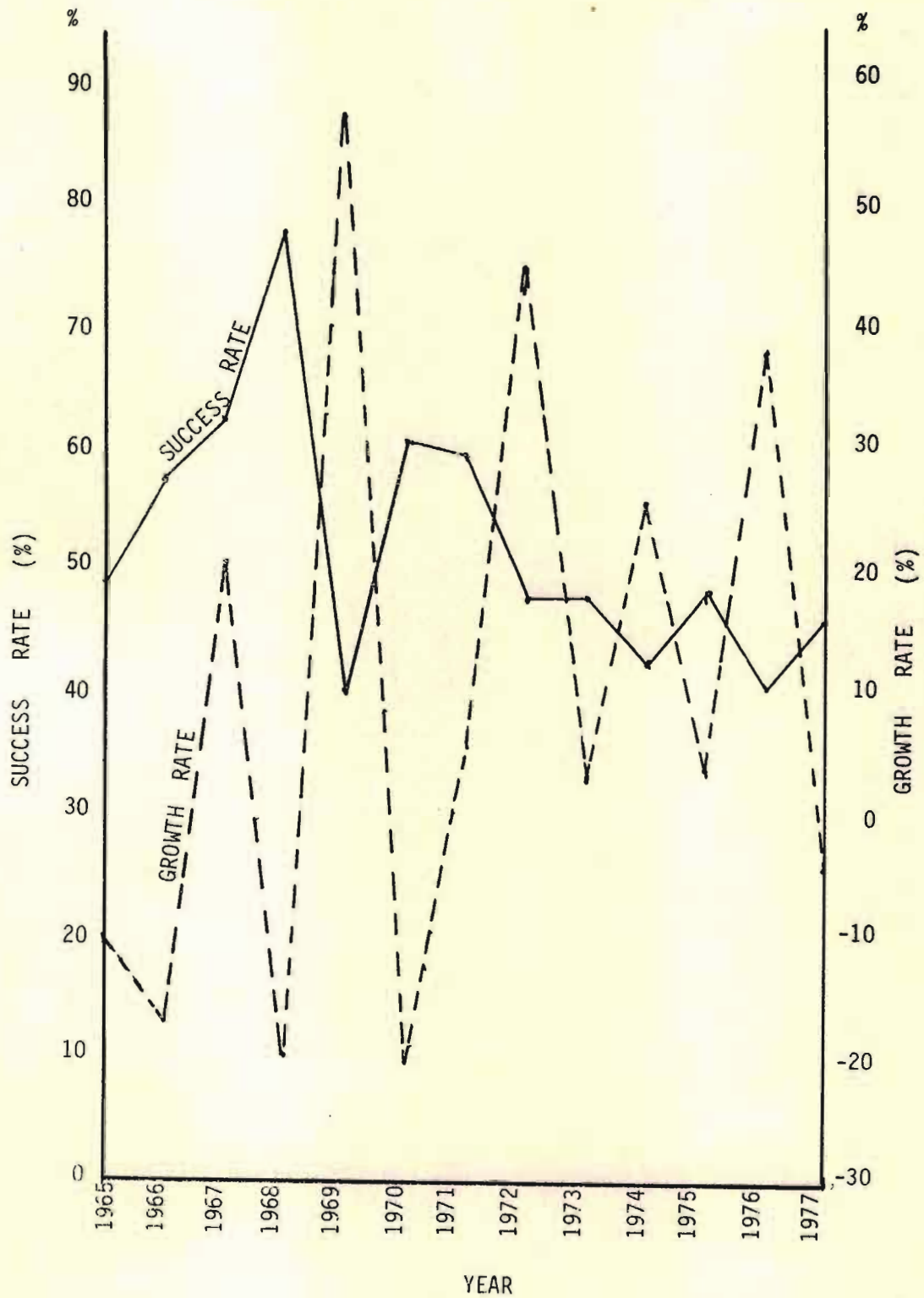


Fig. 4.3 SUCCESS RATE AND GROWTH RATE AT UD-W: 1965-1977



Fig. 4.3 illustrates the following features:

- (a) There were considerable fluctuations in the success rates.
- (b) The growth rate also fluctuated considerably.
- (c) The success rates and growth rates were closely related. Positive growth rates were accompanied by decreases in the success rates while negative growth rates resulted in an increase in success rates. Sharp increases in enrolment, as in 1969, 1972 and 1976, were accompanied by considerable declines in the success rates. The opposite occurred in years when there were major declines in first-year enrolment. In 1966, 1968 and 1970, when large negative growth rates were recorded, the success rates rose sharply.
- (d) The relationship between the success rate and growth rate at the University of Durban-Westville is similar to that found at White universities.

It can be concluded therefore, that one of the factors affecting the success rate at the University of Durban-Westville is the growth rate of its first-year enrolment. Large positive growth rates result in declines in pass rates while negative growth rates are accompanied by increases in pass rates.

If large increases in first-year enrolment result in sharp declines in the success rate then it is probable that there is, *inter alia*, either a drop in the quality of the new registrations involved or that the university teaching staff are unable to cope effectively with large groups of first-year students.

#### 4.2.3. Success Rates of Male Students and Female Students

An analysis was made of the data relating to degrees, diplomas and

certificates obtained by new first-year students to ascertain whether the success rates of male students differed from those of females. Table 4.13 contains the relevant data.

TABLE 4.13

SUCCESS RATES OF MALE AND FEMALE STUDENTS AT THE UNIVERSITY OF DURBAN-WESTVILLE : 1961-1977

Year	First-Year Male Students	First-Year Female Students	Degrees, Diplomas and Certificates Awarded to Males	Degrees, Diplomas and Certificates Awarded to Females	Success Rates for Males	Success Rates for Females
1961	103	11	9	1	8,7	9,1
1962	335	31	34	11	10,1	35,5
1963	312	60	71	14	22,8	23,3
1964	357	74	96	13	26,9	17,6
1965	326	63	158	36	48,5	57,1
1966	247	78	157	34	63,6	43,6
1967	294	101	192	58	65,3	57,4
1968	236	82	174	76	73,7	92,7
1969	385	118	157	46	40,8	39,0
1970	281	122	186	61	66,2	50,0
1971	318	111	181	77	56,9	69,4
1972	438	187	223	78	50,9	41,7
1973	451	198	211	104	46,8	52,5
1974	552	269	235	119	42,6	44,2
1975	599	255	267	149	44,6	58,4
1976	797	390	316	175	39,6	44,9
1977	774	368	330	205	42,6	55,7
Total	6805	2518	2997	1257	44,0	49,9

Figure 4.4 illustrates graphically the pass rates of the male and female students.

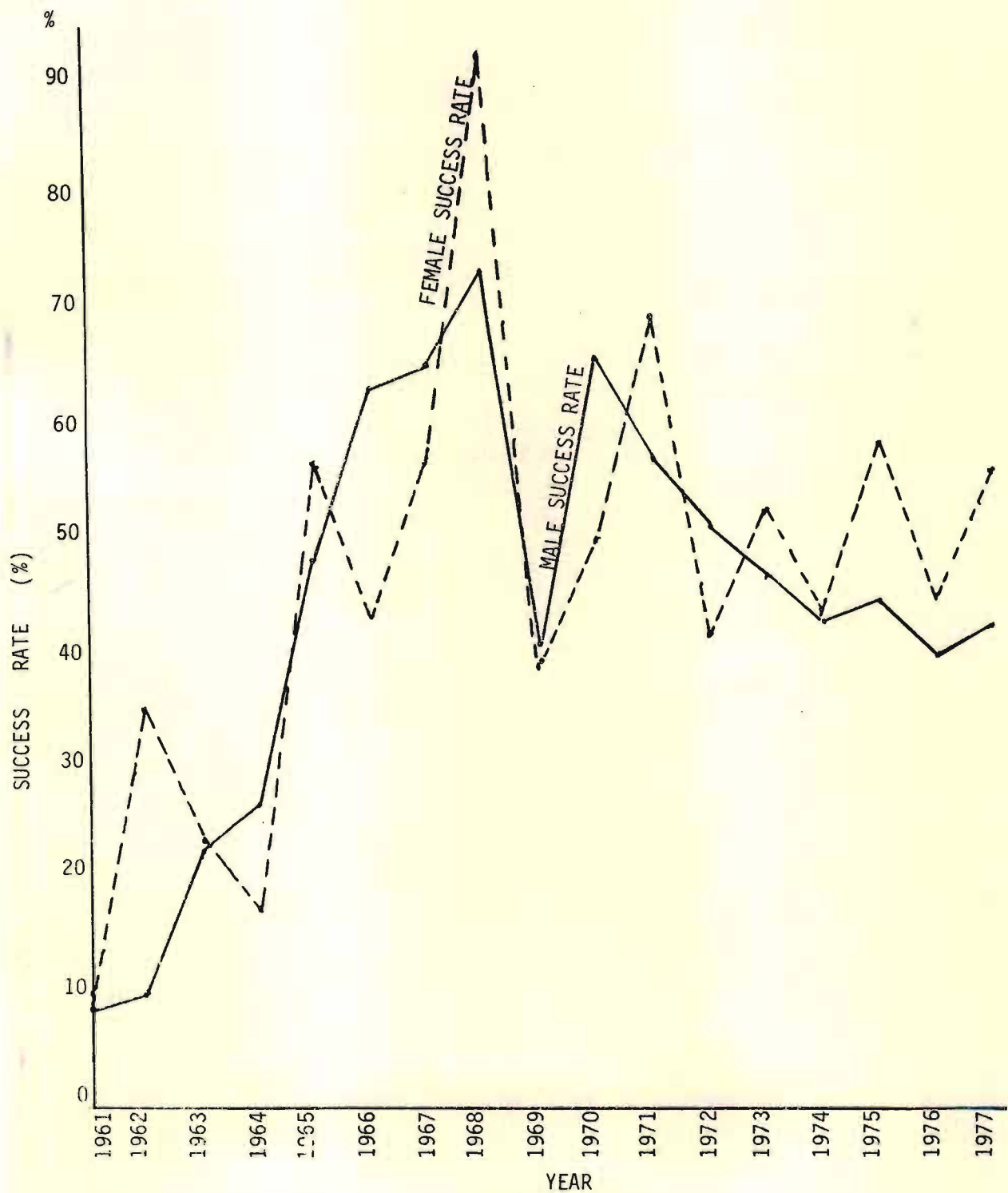


Fig. 4.4 SUCCESS RATES OF MALES AND FEMALES AT UD-W: 1961-1977



The following observations and inferences emerge from Table 4.13 and

Figure 4.4:

- (a) From 1964 to 1972 the male and female success rates fluctuated; greater success favouring either one or the other.
- (b) From 1973 to 1977 however, the female students maintained a superior pass rate over the males.
- (c) For the period 1961 to 1978 the females had a mean success rate of 49,9% compared with the 44,0% of the males. Therefore the female students were more successful than the males.
- (d) Further, the female success rate exhibited a greater degree of fluctuation over the years than those of the male. This implied, *inter alia*, that the female success rate was more sensitive to the student growth rate than the male success rate, i.e., when the success rate for the student group increased, the increase in the female success rate was greater than that of the males, and when the success rate of the student group decreased, the female success rate declined below that of the males.
- (e) A  $\chi^2$  test was applied to the differences in the proportions of males and females graduating. A value of 25,61 was obtained ( $p < 0,001$ ). Therefore, compared with males a significantly greater proportion of females graduated.

This finding is similar to that of the CUP who, in their analysis, found that female students were generally more successful at university than males (Erens and Louw, 1978, 52). In an earlier study Steyn (1963) made similar findings. The reason is most probably the result of the fact that at university, male students outnumber female students who, as a result, constitute a smaller, more select group than the males and therefore, perform better academically. With the analysis of the success

rates of the male students, female students and the total student body completed, a study of the success rate at the University of Durban-Westville on a Faculty basis follows:

#### 4.2.4. Success Rates per Faculty at the University of Durban-Westville

It has been established that some Faculties are more successful than others with the graduation of the students they admit. A good example is the Faculty of Arts where a greater proportion of students graduate, than, for example, in Science. Research at Black and White universities in South Africa has confirmed this to be so (Steyn, 1963; Erens, 1977, 19; Penny, 1979, 8). In order to ascertain the situation at the University of Durban-Westville, the success rate of each Faculty was calculated. The numbers of students admitted for the first time to each Faculty and the number obtaining degrees, diplomas and certificates in each Faculty for each first-year intake, as well as the success rates of the five Faculties are shown in Table 4.14 (Page 118). While the Faculties of Commerce and Law came into being in 1965 and 1971 respectively, courses in these subjects had been offered on a departmental basis from earlier dates.

It must be noted that from 1961 to 1970 certain students enrolled in one Faculty but graduated in another. This applied in particular, to the Faculty of Education, where students who completed their Higher Primary Teacher's Diploma, Junior Secondary Teacher's Diploma and the University Education Diploma (non-graduate), were students who had initially enrolled and completed a required number of academic degree courses in the Faculty of Arts, Commerce or Science or a combination of courses from these Faculties. The success rate of the Faculty of Education would therefore be inflated at the expense of the other Faculties. As a result the



TABLE 4.14

SUCCESS RATES PER FACULTY AT THE UNIVERSITY OF DURBAN-WESTVILLE: 1961-1977

	Number of First-Year Students					No. of Awards: Degrees, Diplomas & Cert.					Success Rates (%)				
	Arts	Commerce	Education	Law	Science	Arts	Commerce	Education	Law	Science	Arts	Commerce	Education	Law	Science
1961	34	3	-	-	77	3	0	1	-	6	8,8	0	-	-	7,8
1962	140	12	95	-	119	12	1	19	-	13	8,6	8,3	20,0	-	10,9
1963	160	15	47	-	150	31	4	20	-	30	19,4	26,7	42,6	-	20,0
1964	152	11	80	-	188	53	3	29	-	24	34,9	27,3	36,3	-	12,8
1965	167	11	92	-	119	78	2	86	-	28	46,7	18,2	93,5	-	23,5
1966	142	27	56	1	99	88	6	67	0	31	62,0	22,2	119,6	0	31,3
1967	155	35	99	4	102	114	9	87	0	40	73,5	25,7	87,9	0	39,2
1968	113	45	61	8	91	108	22	88	0	32	95,6	48,9	144,3	0	35,2
1969	157	109	69	14	154	83	22	63	4	31	52,9	20,2	91,3	28,6	20,1
1970	121	95	48	21	118	90	51	47	3	56	74,4	53,7	97,9	14,3	47,5
1971	125	114	60	9	120	79	70	60	7	42	63,2	61,4	100	77,8	35,0
1972	153	150	101	12	209	94	81	60	1	65	61,4	54,0	59,4	8,3	31,1
1973	208	143	72	9	216	108	60	63	1	65	51,9	42,0	87,5	11,1	30,1
1974	207	184	140	25	256	132	89	68	4	61	63,8	48,4	48,6	16,0	23,8
1975	169	198	155	26	292	131	92	113	14	66	77,5	46,5	72,9	53,8	22,6
1976	273	295	219	71	324	153	86	150	20	82	56,0	29,2	68,5	28,2	25,3
1977	338	231	196	65	292	175	95	164	10	89	51,8	41,1	83,7	15,4	30,5
Total	2814	1678	1590	265	2926	1532	693	1185	64	761					
$\bar{X}$ (1961-1977)											54,4	41,3	74,5	24,2	26,0
$\bar{X}$ (1965-1977)											61,6	43,1	81,6	24,2	28,8



success rates for the Education Faculty exceeded 100% on a few occasions. In the seventies these diplomas were discontinued and the "discrepancy" disappeared.

The following observations are made from Table 4.14 (Page 118):

The success rates per Faculty for the period 1961-1977, in descending order of magnitude, were:

Education	74,5%,
Arts	54,4%,
Commerce	41,3%,
Science	26,0%,
Law	24,2%.

The success rates revealed a very wide range from a very low 24,2% for Law to a commendably high 74,5% for Education. Arts had a moderate 54,4% which was higher than the 41,3% for Commerce. The figure for Science was a very low 26,0%. The graph that follows explains for itself.

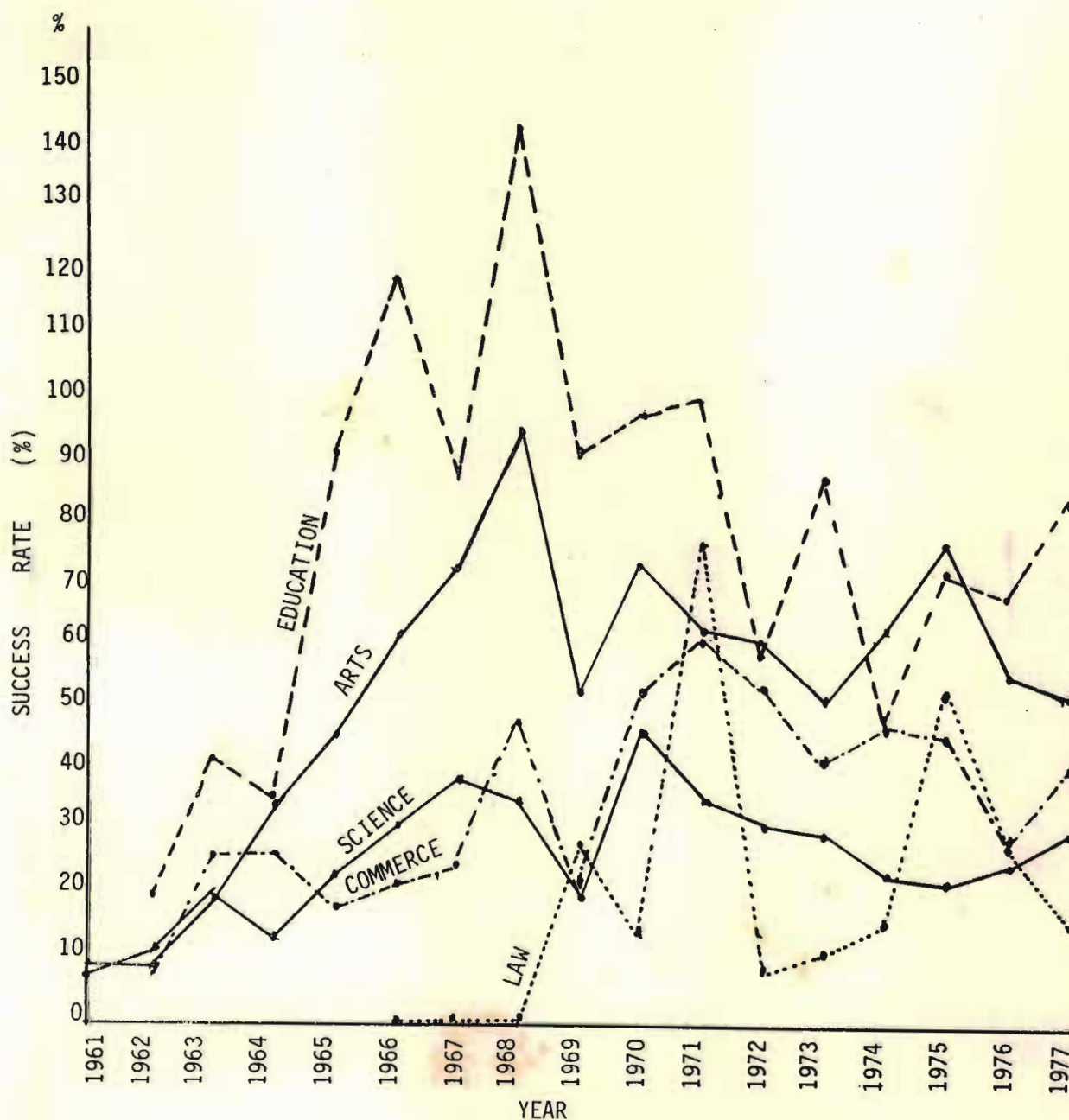


Fig. 4.5 SUCCESS RATES PER FACULTY AT UD-W: 1961-1977

- The success rates for the Law Faculty showed two distinct peaks in 1971 and 1975.
- The remaining Faculties showed generally increasing success rates up to 1968 but experienced major declines in 1969 when the growth rate of enrolment was excessively high, i.e., 58.2%. The pass rates of all Faculties improved in 1970 but continued to decline thereafter.

- (c) The nature of the growth in the total annual enrolment of new first-year students affected not only the total success rate but also those of individual Faculties. However, Science appeared to be less sensitive than others to changes in growth rates.

A new set of success rates was calculated for each Faculty, excepting for the years 1961 to 1964 which were early "teething" years for the University of Durban-Westville. This step was also felt necessary to make valid comparisons with corresponding success rates of other universities in South Africa, whose data relate to more recent years although the universities were long established by comparison with the University of Durban-Westville.

If the data from 1965 onwards are considered, then the mean success rates at the University of Durban-Westville were:

Faculty of Education	81,6%;
Faculty of Arts	61,6%;
Faculty of Commerce	43,1%;
Faculty of Science	28,8%;
Faculty of Law	24,2%.

In the new set of success rates the Faculty of Education retained a high success rate of 81,6% compared with the previous 74,5%. The Faculty of Arts improved from 54,4% to 61,6%. The success rates of the other Faculties remained low with Science and Law very low indeed.

A  $\chi^2$  test for the distribution of success rates among the Faculties yielded a value of 1222,81 ( $p < 0,001$ ). Significant differences existed among the success rates of the five Faculties.



$\chi^2$  was also calculated for the differences in success rates for pairs of Faculties as follows:

- (i) Education (81,6%) and Arts (61,6%):  $\chi^2 = 155,21$  ( $p < 0,001$ )
- (ii) Arts (61,6%) and Commerce (43,1%):  $\chi^2 = 132,27$  ( $p < 0,001$ )
- (iii) Commerce (43,1%) and Science (28,8%):  $\chi^2 = 76,91$  ( $p < 0,001$ )
- (iv) Science (28,8%) and Law (24,2%):  $\chi^2 = 2,50$  ( $p > 0,05$ ).

With the exception of the Science-Law pairing, the Faculties differed significantly among one another.

The findings in respect of success rates at the University of Durban-Westville were compared with those for White universities in South Africa. The CUP investigation has not evaluated the success rate of White universities on a Faculty basis. However, Steyn (1963) calculated these in five study directions at White residential universities for the period 1954-1957. Although Steyn's findings were established some time ago, they are, however, used for comparison with those at the University of Durban-Westville because they are the only such findings available. The following table (Table 4.15) contains Steyn's findings together with those obtained in this study for the University of Durban-Westville.

TABLE 4.15

SUCCESS RATES AT THE UNIVERSITY OF DURBAN-WESTVILLE AND WHITE UNIVERSITIES

Faculty	White Universities 1954-1957		University of Durban-Westville 1965-1977	
	No. Enrolling for First Degree	% Graduating	No. Enrolling for First Degree	% Graduating
Arts	3388	63,3	2328	61,6
Science	2142	47,6	2392	28,8
Commerce	984	43,9	1637	43,1

The following observations and inferences are made from Table 4.15:

- (a) For Arts, the mean rate of 61,6% for the University of Durban-Westville compared favourably with the 63,3% for the White universities.
- (b) The 43,1% for Commerce also compared favourably with the 43,9% for Whites.
- (c) The pass rate of 28,8% for Science at the University of Durban-Westville was however, considerably lower than the 47,6% for the White universities.
- (d) The difference in the pass rates in Science between the University of Durban-Westville and the White universities was highly significant:  $\chi^2 = 154,83$  ( $p < 0,001$ ). The difference between the Arts and Commerce pass rates was not significant. While Steyn's figures are for bachelor's degrees only, the University of Durban-Westville's figures for Arts and Commerce included a very small number of diplomas and certificates. However, they are not expected to alter the findings because the diplomas and the certificates comprised a very small percentage of the total awards of the Faculties of Arts and Commerce. The Science Faculty offers degrees only.

#### 4.3. SUMMARY

##### Pass Rates

For degrees and diplomas (including certificates) the mean pass rate at the University of Durban-Westville for the period 1971-1976 was 53,8%, compared with 60,8% for White residential universities for the period 1959-1967; and 57,9% for Indian students at White residential universities for the period 1971-1976. These differences were highly significant.

For degrees only, the mean pass rate of the University of Durban-Westville was 51,9% compared with 58,7% for Indian students at the White residential universities and 62,8% for White students.

For diplomas and certificates the mean pass rate at the university of Durban-Westville was 64,1% for 1971-1976. Mean pass rates per Faculty were 72,5% for Education; 51,3% for Commerce; 36,6% for Arts.

### Success Rates

The success rates at the University of Durban-Westville rose rapidly from 8,8% for the 1961 intake of students to an impressive 78,6% for 1968. In 1969 the success rate fell sharply to 40,4% and although it recovered to 61,3% in 1970, it has shown a decline since then. The mean success rate for 1961-1977 was 45,6% and if the early years of the University are excluded, then the success rate for 1965-1977 was 49,8%. The success rates at the University of Durban-Westville were considerably lower than those for White residential universities where, for the period 1961-1975, the pass rates ranged from 58% to 75%, with a mean of 65%. The difference in success rates was highly significant.

Up to 1972 there was little difference between the success rates of male and female students at the University of Durban-Westville. However, after 1972, the females were more successful than males. For the period 1961-1977 the mean success rates were 49,9% for females and 44,0% for males. This difference was highly significant.

Significant differences were found among the pass rates of the various Faculties at the University of Durban-Westville. The mean pass rates per Faculty were: Education 74,5%; Arts 54,4%; Commerce 41,3%; Science 26,0%; Law 24,2%.



## CHAPTER FIVE

### THE LONGITUDINAL STUDY

The pass rates and success rates calculated and discussed in the previous chapter clearly showed that the rates of the University of Durban-Westville were considerably lower than those obtaining at White universities. In addition, the pass and success rates at the University of Durban-Westville were on a decline. On the other hand the pass rates at White universities had been remarkably consistent and the success rates had shown improvement over the years.

When more than 50% of the students at the University of Durban-Westville leave without obtaining the qualifications they enrol for, there should be serious concern over this wastage. According to Pervin *et al* (1966, 237) the phenomena affecting graduation and drop-out are multi-faceted and therefore need to be investigated broadly (as has been done in the previous chapter) and in concentrated detail (as will be attempted in the remaining chapters).

It is essential to obtain as clear a profile as possible of success and failure, as well as of graduation and drop-out, in terms of as many important available variables as possible. This should assist educationists and administrators at the University of Durban-Westville to

- (a) apply corrective measures so that the academic shortfalls can be reduced and, if possible, eliminated and
- (b) undertake further research into the problems exposed.

With the above issues in mind an in-depth longitudinal study of students at the University of Durban-westville was undertaken. A detailed description of this investigation follows in this chapter and those

that follow.

### 5.1. SELECTION OF STUDENTS

In this longitudinal investigation the students selected were those whose registration at the University of Durban-Westville was their first at a tertiary institution.

The investigation covered the period 1971 to 1976. It was decided not to select students who enrolled after 1976, because the investigation required the "tagging" of students enrolling in each year, and following the progress made until they graduated or dropped out. Many students enrolling in 1977 and thereafter are more likely to be still on campus (in 1980) and are thus excluded from a study of this nature.

Student data required for this study were obtained from, *inter alia*, student files, master cards and examination result sheets.

Master cards of all students registered for each of the years 1971-1976 had to be examined individually. The first requisite was to eliminate:

- (a) all those students who were not first-year students as defined in this investigation, and
- (b) all those genuine first-year students who had registered at the beginning but failed to return for lectures for one reason or another.

These latter students included those who had registered at the University of Durban-Westville while awaiting replies for admission to other universities or colleges and who would have left this university if their application had succeeded. Other students in category (b) above were those who had registered provisionally but who would have left after failing the supplementary matriculation examinations.

Table 5.1 below shows the number of students whom the university administration records indicated as first-year students as well as those genuine first-year students selected for the investigation.

TABLE 5.1

TOTAL FIRST-YEAR STUDENTS AND NUMBER SELECTED FOR STUDY

	1971	1972	1973	1974	1975	1976	71-76
First-year students (according to Administration)	585	728	750	913	944	1302	5222
First-year students selected for study	457	641	679	663	695	985	4120

Table 5.1 reveals that of the 5222 students who had enrolled over the six years, 1100 students were excluded from this investigation. A total of 4120 students became the subjects of the longitudinal study.

5.1.1. Collection, Collation and Coding of Data

Almost all the information contained in the master card for each student was used in the longitudinal study. Each master card contained academic and non-academic information pertaining to the student. This information included the student's name, address, marital status, sex, registration number, date of birth, year of enrolment, Faculty of study, whether full-time or part-time, name of degree or diploma enrolled for, age, high school attended, home language, religion, senior certificate details such as pass aggregate, subjects taken for matriculation and symbols obtained, and the student's academic record while at university.

The card recorded the course, year of study and subjects taken by the student in each year at university and the examination results in each subject at the end of each semester or year.



The marks obtained by the students were given. If he had dropped out, then the date of leaving was recorded. If the student had graduated, then the degree or diploma obtained, together with the date of graduation was noted. Courses taken for non-degree purposes (N.D.P.) were also indicated as were refusals of Duly Performed Certificates (Xdps), absence from examination, aegrotat and supplementary examinations and results, and suspension or expulsion of the student.

All the information mentioned above, excluding the student's name and religion, was written down for each of the 4120 students. The name of the student was omitted as it was a confidential item in the research; religion was omitted because most students had not indicated it. Where necessary, students' master cards were compared with students' files to check data. Departments and Faculties were consulted to clarify issues, e.g., promotion requirements, and the examinations section of the university was consulted regarding examination results.

The data were then coded, before being transferred to coding sheets.

The coded information was punched onto computer cards. The information for each of the 4120 students was put onto one card, thus giving a total of 4120 cards. Checking was undertaken at every stage. Errors necessitated correction of coded information and the re-punching of cards. Re-checking was repeated until all errors discovered were removed and the cards ready for programming.

#### 5.1.2. Computer Programming

A series of computer programmes was compiled:

- (a) The first set of computer programmes analysed a variety of characteristics - both academic and non-academic - of first-year students of

- 1971-1976. This is discussed in section 5.2 of this chapter.
- (b) The second set analysed the first-year university results of the selected students (Chapter 6).
  - (c) The third set analysed the first-year results of the "Pass" group and the "Fail" group in relation to a number of student and university variables (Chapter 7).
  - (d) The fourth set of computer programmes analysed the academic performance of the graduates from the 1971-1976 first-year students in this study (Chapter 8).
  - (e) The fifth set analysed the academic performance of drop-outs from the students of the 1971-1976 first-year intakes (Chapter 9).
  - (f) The sixth set identified relationships between selected student and university variables and graduation and drop-out (Chapter 10).
  - (g) The final set of computer programmes calculated  $\chi^2$  values testing independence. (Appendix 1, p. 384 provides a description and discussion of  $\chi^2$ ).

The computer was an indispensable ally in this investigation. The programmes were processed by a Univac 90/30 computer using Fortran IV language, and housed in the Computer Centre of the University of Durban-Westville.

In this chapter and those that follow, the analysed data are tabulated, graphically illustrated where it was felt appropriate, described and discussed. Statistical inferences were drawn where it was deemed necessary.

## 5.2. FIRST-YEAR ENROLMENTS : 1971-1976

In this section first-year enrolments are analysed in respect of the following factors: male or female, full-time or part-time, Faculty, degree

or diploma, duration of degree or diploma, home province, commuter distance to university, home language, age, matriculation status, matriculation aggregate, matriculation subjects and matriculation symbols.

The above factors constitute an important part of the basic data for the longitudinal study. These factors, together with others, comprise the variables that will be tested in subsequent chapters for their predictive capacity for:

- (a) passing or failing first year, and
- (b) graduating or dropping out from university.

Therefore a detailed analysis is made in this chapter of each of the above factors to facilitate as clear an understanding as possible of the relationship of each factor with the academic performance of students. Other findings in this research should be perceived with greater clarity against the background of the finer details arising from this analysis.

#### 5.2.1. Degree-Diploma Enrolment : 1971-1976

Table 5.2 (p. 131) shows the distribution of student enrolments according to degrees or diplomas they had registered for.

The following observations and inference emerge from Table 5.2:

- (a) Enrolments for both degrees and diplomas showed considerable growth over the 6-year period 1971-1976.
- (b) However, the percentage of diploma enrolments increased from 10,3% in 1971 to 20,1% in 1976; while the degree enrolment decreased from 89,7% to 79,9% for the same period.
- (c) The difference between the degree and diploma enrolments of 1971 and 1976 was highly significant.  $\chi^2 = 80,86$  ( $p < 0,001$ ).



TABLE 5.2

DEGREE AND DIPLOMA ENROLMENTS OF FIRST-YEAR STUDENTS AT THE UNIVERSITY OF DURBAN-WESTVILLE : 1971-1976

Year	Degree		Diploma		Total	
	No.	%	No.	%	No.	%
1971	410	89,7	47	10,3	457	100
1972	582	90,8	59	9,2	641	100
1973	631	92,9	48	7,1	679	100
1974	564	85,1	99	14,9	663	100
1975	582	83,7	113	16,3	695	100
1976	787	79,9	198	20,1	985	100
1971-1976	3556	86,3	564	13,7	4120	100

#### 5.2.2. Enrolment per Faculty

Table 5.3. (p. 132) shows the distribution of first-year enrolments from 1971 to 1976 in the five Faculties at the University of Durban-Westville. The percentage enrolment per Faculty for each year is also indicated.

Table 5.3 reveals the following facts:

- (a) The Arts Faculty enrolment decreased over the 6-year period from over 30% of the total enrolment to about 25%.
- (b) The Education Faculty, on the other hand, showed increased enrolment from about 15% to about 20% over the same period.
- (c) The Law Faculty increased from under 1% to about 6%.
- (d) The Science Faculty, with some small fluctuation, was stable at about 30%, although the 1971 and 1976 figures were rather low.
- (e) The Commerce Faculty was the most stable with enrolments around 25%.

TABLE 5.3

FIRST-YEAR STUDENTS ACCORDING TO FACULTY AT THE UNIVERSITY OF DURBAN-WESTVILLE : 1971-1976

Year	FACULTY											
	Arts		Commerce		Education		Law		Science		Total	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
1971	168	36,8	115	25,2	65	14,2	4	0,9	105	23,0	457	100
1972	192	30,0	163	25,4	96	15,0	8	1,2	182	28,4	641	100
1973	220	32,4	163	24,0	67	9,9	18	2,7	211	31,1	679	100
1974	165	24,9	157	23,7	112	16,9	33	5,0	196	29,6	663	100
1975	138	19,9	171	24,6	140	20,1	30	4,3	216	31,1	695	100
1976	250	25,4	260	26,4	192	19,5	60	6,1	223	22,6	985	100
Total	1133	27,5	1029	25,0	672	16,3	153	3,7	1133	27,5	4120	100

(f) The totals for each Faculty over the 6-year period showed that the percentage intake of new first-year students was as follows:

(i)	Arts	27,5%
(ii)	Science	27,5%
(iii)	Commerce	25,0%
(iv)	Education	16,3%
(v)	Law	3,7%.

The proportion of students entering each Faculty, each year, for the 1971-1976 period showed differences. A  $\chi^2$  test showed that these differences were significant.  $\chi^2 = 133,39$  ( $p < 0,001$ ).

#### 5.2.3. Enrolment : Male-Female; Full-time-Part-time

The enrolment for each year was analysed on male-female and full-time-part-time bases. The results are shown in Table 5.4.

TABLE 5.4

MALE-FEMALE AND FULL-TIME-PART-TIME DISTRIBUTION OF FIRST-YEAR STUDENTS  
AT THE UNIVERSITY OF DURBAN-WESTVILLE : 1971-1976

Year	Male		Female		Full-time		Part-time		Total
	No.	%	No.	%	No.	%	No.	%	
1971	333	72,9	124	27,1	365	79,9	92	20,1	457
1972	446	69,6	195	30,4	577	90,0	64	10,0	641
1973	468	68,9	211	31,1	630	92,8	49	7,2	679
1974	459	69,2	204	30,8	645	97,3	18	2,7	663
1975	485	69,8	210	30,2	657	94,5	38	5,5	695
1976	675	68,5	310	31,5	947	96,1	38	3,9	985
Total (1971-1976)	2866	69,5	1254	30,4	3821	92,7	299	7,3	4120



Table 5.4. shows that:

- (a) there was a rapid rise in the total enrolment of first-year students with the 1976 enrolment of 985 more than double that of the 1971 figure of 457;
- (b) the male-female ratio remained remarkably constant with the males approximately 70% of enrolment each year and the females 30%;
- (c) there was a marked decline in the part-time enrolment from 20% in 1971 to under 4% in 1976. This change in the proportion of part-time students was highly significant.  $\chi^2 = 160,6$  ( $p < 0,001$ ).

Figures 5.1 and 5.2 illustrate graphically the data in Table 5.4.

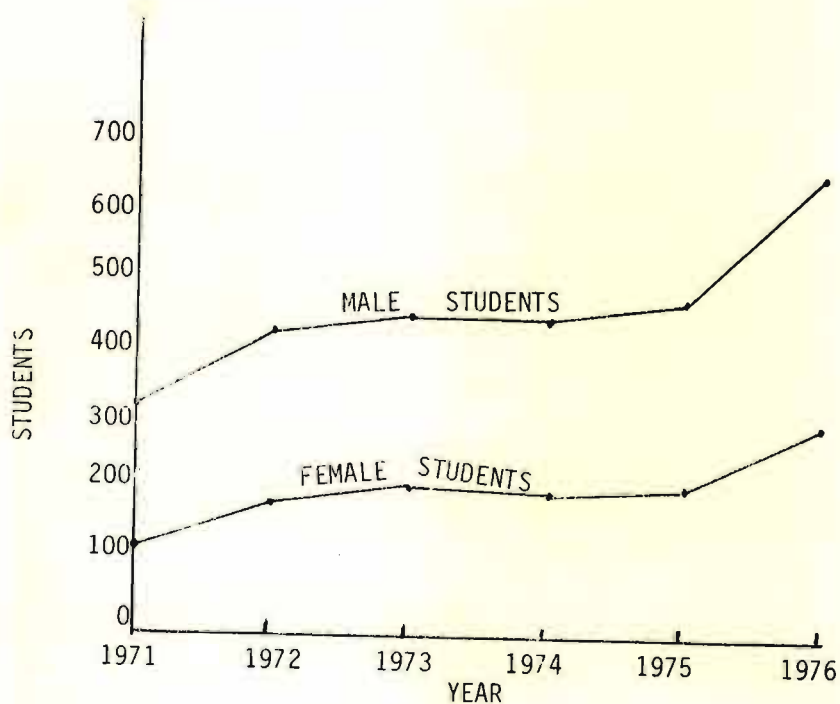


Fig. 5.1 DISTRIBUTION OF STUDENTS ACCORDING TO SEX AT UD-W: 1971-1976

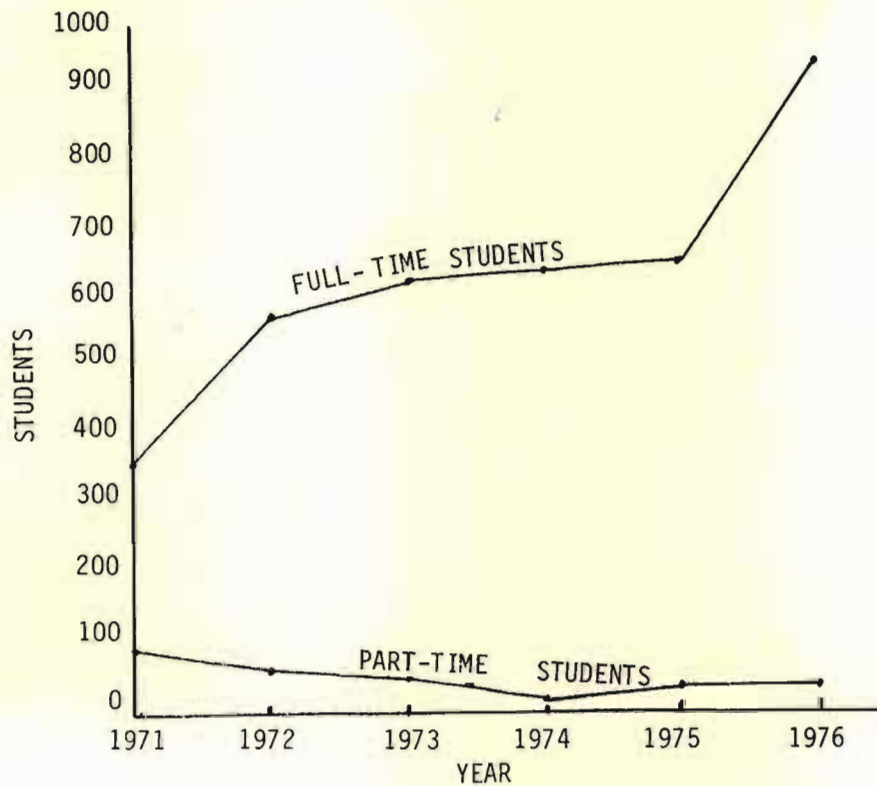


Fig. 5.2 DISTRIBUTION OF FULL-TIME AND PART-TIME STUDENTS AT UD-W : 1971-1976

The following observations and inferences are made from Table 5.4 and Figures 5.1 and 5.2 :

- (a) Figure 5.1 illustrates graphically the consistency of the male-female ratio and the sharp increase in male and female enrolments in 1976. This increase was the result of the greater percentage of standard ten candidates of 1975 obtaining matriculation exemption as a result of the introduction of the 4-phase, differentiated system of school education, which, *inter alia*, altered the requirements of the curriculum and of the examination for a matriculation exemption pass.
- (b) Figure 5.2 gives a clear illustration of the continuing decline of the part-time enrolment. The principal cause of this decrease was the change of the venue for part-time lectures from central Durban to the new campus at Chiltern Hills which is 10 kilometres out of

Durban and not so easily accessible. Part-time students formed a minor constituent of the total enrolment in this study.

- (c) The mean female new first-year enrolment of 30,4% at the University of Durban-Westville is much lower than the mean of 40,1% for White female students for the period 1971-1976 (Erens and Louw, 1978, 61). In fact, the percentage of White females showed a steady increase to 44% in 1976.

Table 5.5 shows the male-female distribution of new first-years at the University of Durban-Westville and at the White residential universities respectively, for the period 1971 to 1976.

TABLE 5.5

DISTRIBUTION ACCORDING TO SEX OF FIRST-YEAR STUDENTS AT THE UNIVERSITY OF DURBAN-WESTVILLE AND THE WHITE RESIDENTIAL UNIVERSITIES : 1971-1976

University	Male		Female	
	No.	%	No.	%
University of Durban-Westville	2886	70,0	1234	30,0
White Residential Universities	56447	59,9	37746	40,1

The differences in the male-female distribution in Table 5.5.were subjected to a  $\chi^2$  test and were found to be highly significant.  $\chi^2 = 168,99$  ( $p < 0,001$ ).

#### 5.2.4. Male-Female distribution according to Faculty

The male-female distribution amongst the five Faculties for the six-year period 1971-1976 is shown in Table 5.6 (p. 137).



TABLE 5.6

MALE-FEMALE DISTRIBUTION OF FIRST-YEAR STUDENTS ACCORDING TO FACULTY  
AT THE UNIVERSITY OF DURBAN-WESTVILLE : 1971-1976

Sex	Faculty									
	Arts		Commerce		Education		Law		Science	
	No.	%	No.	%	No.	%	No.	%	No.	%
Male	612	54,0	887	86,2	355	52,8	125	81,7	887	78,3
Female	521	46,0	142	13,8	317	47,2	28	18,3	246	21,7
Total	1133	100	1029	100	672	100	153	100	1133	100

The following observations and inferences are made from Table 5.6:

- (a) Students in the Faculties of Commerce, Law and Science were predominantly male - 86,2% in the Faculty of Commerce and about 80% in Law and Science.
- (b) The Faculties of Arts and Education had a more or less equitable distribution.
- (c) In all Faculties, enrolment of male students outnumbered the females.
- (d) The differences in the proportions of males to females among the Faculties were highly significant.  $\chi^2 = 404,15$  ( $p < 0,001$ ).

#### 5.2.5. Male-Female Distribution of Full-time and Part-time Enrolments per Faculty

Table 5.7 (p. 138) shows the distribution of full-time and part-time students over the period 1971-1976. The male-female distributions of each group are also indicated. Only the Faculties of Arts and Commerce offered part-time courses for first-year students.

TABLE 5.7

MALE-FEMALE DISTRIBUTION OF FULL-TIME AND PART-TIME FIRST-YEAR STUDENTS PER FACULTY AT THE UNIVERSITY OF DURBAN-WESTVILLE : 1971-1976.

Faculty	Total	Full-Time	Full-Time Male		Full-Time Female		Part-Time	Part-Time Male		Part-Time Female		Total	
			No.	%	No.	%		No.	%	No.	%	Male	Female
Arts	1133	896	432	48,2	464	51,8	237	180	75,9	57	24,1	612	521
Commerce	1029	967	830	85,8	137	14,2	62	57	91,9	5	8,1	887	142
Education	672	672	355	52,8	317	47,2	-	-	-	-	-	355	317
Law	153	153	125	81,7	28	18,3	-	-	-	-	-	125	28
Science	1133	1133	887	78,3	246	21,7	-	-	-	-	-	887	246
Total	4120	3821	2629	68,8	1192	31,2	299	237	79,3	62	20,7	2866	1254

The following observations and inferences emerge from Table 5.7:

- (a) The Arts Faculty enrolled a greater proportion of part-time students than Commerce. The full-time-part-time ratio for the Arts Faculty was 3,78 : 1 while that for the Commerce Faculty was 15,60 : 1. This difference in proportions was subjected to a  $\chi^2$  test and a value of 100,36 ( $p < 0,001$ ) was obtained. The proportion of part-time students was therefore significantly greater in the Arts Faculty than in Commerce.
- (b) The male-female distributions among part-time and full-time students were subjected to a  $\chi^2$  test of significance.  $\chi^2 = 14,33$  ( $p < 0,001$ ). Therefore females formed a significantly greater percentage (31,2%) of the full-time students than of the part-time students (20,7%).

5.2.6. Enrolment according to three-year, four-year, five-year and six-year degrees; and two-year and three-year diplomas.

Students took three-year, four-year, five-year and six-year degrees as well as two-year and three-year diplomas. These degrees and diplomas have been listed in Chapter 4, p. 103. A breakdown of enrolment according to the minimum period of study for these degrees and diplomas is given in Table 5.8 (p. 140).

Table 5.8 yields the following observations and inferences:

- (a) By far the most popular degree was the three-year Bachelor - 67,5% of total enrolment; followed by the four-year degree - 15,7% of total enrolment, the six-year Engineering degree - 2,3%, and the new five-year Accounting degree - 0,8%.
- (b) The three-year diplomas accounted for 11,1% of the enrolment and the two-year diplomas 2,5%.



TABLE 5.8

ENROLMENT ACCORDING TO MINIMUM PERIOD FOR DEGREES AND DIPLOMAS OF FIRST-YEAR STUDENTS AT THE UNIVERSITY OF DURBAN-WESTVILLE : 1971-1976

Year	Number of Students Enrolling for										Total			
	3-year Degrees		4-year Degrees		5-year Degrees		6-year Degrees		2-year Diplomas				3-year Diplomas	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
1971	362	79,2	40	8,8	1	0,2	7	1,5	4	0,9	43	9,4	457	100
1972	483	75,4	94	14,7	0	0,0	5	0,8	4	0,6	55	8,6	641	100
1973	510	75,1	107	15,8	3	0,4	11	1,6	2	0,3	46	6,8	679	100
1974	409	61,7	131	19,8	6	0,9	18	2,7	14	2,1	85	12,8	663	100
1975	439	63,2	99	14,2	16	2,3	28	4,0	14	2,0	99	14,2	695	100
1976	580	58,9	176	17,9	7	0,7	24	2,4	67	6,8	131	13,3	985	100
1971-1976	2783	67,5	647	15,7	33	0,8	93	2,3	105	2,5	459	11,1	4120	100

- (c) Despite occasional fluctuations, all degrees and diplomas showed increases in enrolment over the six-year period 1971-1976.
- (d) A  $\chi^2$  was computed for the three-year, four-year, five-year and six-year degree enrolments. A value of 94,33 ( $p < 0,001$ ) was obtained. Therefore, there existed highly significant differences in the proportions of students taking the various degrees from year to year. The four-year and six-year degrees were increasing in popularity.

The enrolments of three-year and four-year degrees were compared, to discover the extent of the fluctuation in their proportions over the period 1971-1976. Table 5.9 shows the distribution as well as the percentages.

TABLE 5.9

ENROLMENTS FOR THREE-YEAR AND FOUR-YEAR DEGREES BY FIRST-YEAR STUDENTS AT THE UNIVERSITY OF DURBAN-WESTVILLE : 1971-1976

Degrees	1971		1972		1973		1974		1975		1976		Total	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
3-year	362	90,0	483	83,7	510	82,7	409	75,7	439	81,6	580	76,7	2783	81,1
4-year	40	10,0	94	16,3	107	17,3	131	24,3	99	18,4	176	23,3	647	18,9
Total	402	100	577	100	617	100	540	100	538	100	756	100	3430	100

The following observation and inference emerge from the above Table:

- (a) The 4-year degree enrolment showed an increase from 10,0% in 1971 to 23,3% in 1976.
- (b) The differences in the proportions of three-year and four-year degree enrolments over the period 1971-1976 were highly significant.

$$\chi^2 = 44,55 (p < 0,001).$$

To eliminate the distortions caused by the small numbers for both Law and the four-year degrees, a  $\chi^2$  was computed for the three popular three-year degrees:

Bachelor of Arts,  
 Bachelor of Commerce and  
 Bachelor of Science .

Table 5.10 shows the distribution of first-year enrolments for the three-year Bachelor of Arts, Bachelor of Commerce and Bachelor of Science degrees for the period 1971-1976.

TABLE 5.10

DISTRIBUTION OF 3-YEAR DEGREE ENROLMENTS OF FIRST-YEAR STUDENTS AT THE UNIVERSITY OF DURBAN-WESTVILLE : 1971-1976

Faculty	1971		1972		1973		1974		1975		1976		1971-1976 Total	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Arts	155	43,2	160	33,1	164	32,2	124	30,3	118	26,9	184	31,7	905	32,6
Commerce	114	31,8	163	33,7	156	30,6	140	34,2	141	32,1	217	37,4	931	33,5
Science	90	25,1	160	33,1	190	37,3	145	35,5	180	41,0	179	30,9	944	34,0
Total	359	100	483	100	510	100	409	100	439	100	580	100	2780	100

The following observations and inferences emerge from Table 5.10:

- (a) For the six-year period the enrolments for these degrees were 32,6% for Arts; 33,5% for Commerce and 34,0% for Science. Generally, while Arts showed a slight decline, Commerce was relatively stable while Science improved although the 1976 enrolment showed a decrease.



- (b)  $\chi^2$  was computed for the matrix in Table 5.10. The  $\chi^2$  value obtained was 41,18 ( $p < 0,001$ ). This value is highly significant. This implies that the proportion of students entering these three Faculties for three-year degrees showed significant differences in certain years, e.g., in 1971, Arts had a considerably higher enrolment than Science or Commerce; in 1975 Science topped the group and in 1976 Commerce did so.

Table 5.11 (p. 144) shows the distribution of students in each Faculty for diplomas and degrees, categorised according to the minimum number of years required to obtain them. The full-time-part-time and male-female breakdown is also provided.

The following observations emerge from Table 5.11 (p. 144):

- (a) Of the three-year Bachelor degrees, the Faculty of Arts, Commerce and Science, had about the same number : 905 (32,5%); 931 (33,5%) and 944 (33,9%) respectively.
- (b) Of the 4-year degrees, Education had the highest enrolment of 253 (39,2%), Law and Arts came next with 150 (23,2%) and 145 (22,4%) respectively. Science had 96 (14,9%); Commerce had only 2 (0,39%).
- (c) Two-year diplomas were offered by the Faculties of Arts (41,1%) and Commerce (58,9%) while Education had a far bigger enrolment (91,7%) than Arts (8,3%) of the three-year diploma students.

TABLE 5.11

DISTRIBUTION OF FIRST-YEAR STUDENTS ACCORDING TO DEGREES, DIPLOMAS, MALE, FEMALE, FULL-TIME, PART-TIME  
IN EACH FACULTY AT THE UNIVERSITY OF DURBAN-WESTVILLE : 1971-1976

	Faculty	Degrees/Diplomas		Full-time			Part-time		
		Total		Total	Male	Female	Total	Male	Female
		No.	%						
3-year Degrees	Arts	905	32,5	673	375	298	232	176	56
	Commerce	931	33,5	872	748	124	59	54	5
	Law	3	0,1	3	2	1	-	-	-
	Science	944	33,9	944	742	202	-	-	-
4-year Degrees	Total	2783	100	2492	1867	625	291	230	61
4-year Degrees	Arts	145	22,4	140	20	120	5	4	1
	Commerce	2	0,3	2	2	0	0	-	-
	Education	253	39,2	253	138	115	-	-	-
	Law	150	23,2	150	123	27	-	-	-
	Science	96	14,9	96	55	41	-	-	-
	Total	646	100	641	338	303	5	4	1
5-year Degrees	Commerce	33	100	30	28	2	3	3	0
6-year Degrees	Science	93	100	93	90	3	-	-	-
2-year Diplomas	Arts	44	41,1	44	15	29	-	-	-
	Commerce	63	58,9	63	53	10	-	-	-
	Total	107	100	107	68	39	-	-	-
3-year Diplomas	Arts	38	8,3	38	21	17	-	-	-
	Education	419	91,7	419	217	202	-	-	-
	Total	457	100	457	238	219	-	-	-

### 5.2.7. Province of High School attended

Students attending the University of Durban-Westville come from Natal, Transvaal, Cape Province and from outside South Africa. The following Table shows the distribution.

TABLE 5.12

DISTRIBUTION OF FIRST-YEAR STUDENTS AT THE UNIVERSITY OF DURBAN-WESTVILLE  
ACCORDING TO PROVINCE OF HIGH SCHOOL ATTENDED : 1971-1976

	Natal		Transvaal		Cape		Private/ Correspondence		Outside S.Africa		Not in- dicated		Total	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Total	3203	77,7	611	14,8	194	4,7	44	1,1	16	0,4	52	1,3	4120	100
Male	2138	74,6	501	17,5	147	5,1	34	1,2	15	0,5	31	1,1	2866	100
Female	1065	84,9	110	8,8	47	3,7	10	0,8	1	0,1	21	1,7	1254	100

Table 5.12 reveals the following information:

- (a) The great majority of students were from Natal (77,7%) followed by Transvaal (14,8%) and Cape Province (4,7%). These students had taken the Senior Certificate Examination of the Provincial Education Departments, the Department of Indian Affairs or the Department of Coloured Affairs. A small percentage of the first-years were students who had studied privately or by correspondance. An even smaller number had qualifications obtained outside South Africa.
- (b) Among the male students, Natal had the greatest number 74,8%. Natal female students constituted an even greater percentage of the total female students (84,9%). There is a heavy concentration of Indians in and around Durban and the proximity of the University allows daily commuting. This is an important factor as it allows female students



to commute daily between home and university - an arrangement that is preferred by many Indian parents.

An analysis was made of students on a urban-rural basis of the high schools in the three provinces. For this study a rural high school was defined as one situated in a town with fewer than 100 000 inhabitants. Urban high schools were those in cities with populations in excess of 100 000 inhabitants. Table 5.13 contains the distribution.

TABLE 5.13

URBAN-RURAL DISTRIBUTIONS OF FIRST-YEAR UNIVERSITY OF DURBAN-WESTVILLE STUDENTS ACCORDING TO PROVINCE : 1971-1976

Province	Urban		Rural		Total
	No.	%	No.	%	
Natal	2424	75,7	779	24,3	3203
Transvaal	515	84,3	96	15,7	611
Cape	146	75,3	48	24,7	194
Total	3085	77,0	923	23,0	4008

More than 75% of the first-year enrolment were from urban high schools. The percentage for each province was Transvaal 84,3%; Natal 75,7%; Cape Province 75,3%.

#### 5.2.8. Commuter Distance (From Place of Residence to University)

The students were categorised into groups in terms of the distance they travelled to University. The distance of hostel students was categorised as 0 km. The other categories were 1-10km, 11-20km, 21-35km, 35<sup>+</sup>km.

The distances from the University of the major Indian residential areas and suburbs were decisive factors in selecting the various distance

categories. Table 5.14 shows the distribution.

TABLE 5.14

DISTRIBUTION OF FIRST-YEAR STUDENTS ACCORDING TO COMMUTER DISTANCE FROM PLACE OF RESIDENCE TO THE UNIVERSITY OF DURBAN-WESTVILLE : 1971-1976

Group	0 - km Hostel		1-10 km Radius		11-20 km Radius		21-35 km Radius		35+ km Radius		Not Indicated		Total	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Total	1013	24,6	1759	42,7	373	9,1	837	20,3	114	2,8	24	0,6	4120	100
Male	720	25,1	1179	41,1	258	9,0	610	21,3	85	3,0	14	0,5	2866	100
Female	293	23,4	580	46,3	115	9,2	227	18,1	29	2,3	10	0,8	1254	100

The following facts flow from Table 5.14:

- (a) The largest commuter group (42,7%) lived 1-10 km from the university.
- (b) About a quarter of the students (24,6%) lived in the university hostels.
- (c) About 75% of the first-year students lived at home or in lodgings or apartments.
- (d) The rather high figure of 20,3% for those living 21-35 km from the university, included the large residential suburb of Chatsworth.

#### 5.2.9. Home language or Replacement language

Students indicated the following eight languages as those spoken at home: Afrikaans, English, English and Afrikaans, Gujerati, Hindi, Memon, Tamil, Telegu and Urdu. The distribution of the students according to home language is shown in Table 5.15 (p. 148).



TABLE 5.15 .

HOME LANGUAGE (OR REPLACEMENT LANGUAGE) OF FIRST-YEAR STUDENTS AT THE UNIVERSITY OF DURBAN-WESTVILLE: 1971-1976

Home Language or Replacement Language	No.	%
Afrikaans	18	0,4
English	2088	50,7
English and Afrikaans	86	2,1
Gujerati	636	15,4
Hindi	375	9,1
Memon	96	2,3
Tamil	333	8,1
Telegu	102	2,5
Urdu	141	3,4
Not indicated	245	5,9
Total	4120	100

Table 5.15 provides the following information:

- (a) Over 50% of the students indicated that English was the language spoken at home. The use of English at home at the expense of the Indian languages is on the increase.
- (b) Gujerati (15,4%) was second highest, with Hindi (9,1) and Tamil (8,1%) following. The Gujerati form a smaller percentage of the Indian population than the Tamil and Hindi speaking groups. Yet the 15,4% for Gujerati is much higher than the percentages for Hindi and Tamil. One probable reason is that the Gujeratis are withstanding



better the forces of acculturation affecting Indian South Africans.

- (c) The remaining 5 languages had low percentages ranging from 0,4% for Afrikaans to 3,4% for Urdu.

The home language situation at white universities in 1976 was as follows: The number of predominant languages indicated by first-year students were English 39,7% and Afrikaans 53,6%. The balance comprised English and Afrikaans 2,5%, and "other" 4,2% (Erens and Louw, 1978, 39).

The spread of the students according to home languages over the three provinces Natal, Transvaal and Cape Province is shown in Table 5.16. Students who did not indicate home language are excluded.

TABLE 5.16

PROVINCIAL SPREAD OF HOME LANGUAGE (REPLACEMENT LANGUAGE) OF FIRST-YEAR STUDENTS AT THE UNIVERSITY OF DURBAN-WESTVILLE: 1971-1976

Home Language (Replacement Language)	Natal		Transvaal		Cape		Total	
	No.	%	No.	%	No.	%	No.	%
Afrikaans	0	0	9	60	6	40	15	100
English	1668	81,6	248	12,1	129	6,3	2045	100
English & Afrikaans	10	11,8	37	43,5	38	44,7	85	100
Gujerati	402	64,9	208	33,6	9	1,5	619	100
Hindi	357	97,0	11	3,0	0	0	368	100
Memon	56	59,6	38	40,4	0	0	94	100
Tamil	323	99,7	1	0,3	0	0	324	100
Telegu	96	99,0	1	1,0	0	0	97	100
Urdu	121	86,4	18	12,9	1	0,7	140	100

The following facts flow from Table 5.16:

- (a) English was a replacement language in all three provinces. Afrikaans was restricted to the Cape Province (40%) and the Transvaal (60%).
- (b) Of the 85 students speaking English and Afrikaans, only 11,8% were from Natal.
- (c) Except for 30 students, all those speaking Tamil, Telegu, Hindi and Urdu were from Natal.
- (d) Memon-speaking students came from Natal (59,6%) and the Transvaal (40,4%).
- (e) Gujerati had a strong Transvaal representation of 208 out of a total of 619 (33,6%), with the Natal number being 402 (64,9%).

The distribution of home language over commuter distance to the University of Durban-Westville appears in Table 5.17. Only totals are given and the "not indicated" group has been omitted.

Table 5.17 (p. 151) provides the following information :

- (a) A large majority of (i) Afrikaans-speaking and (ii) English and Afrikaans-speaking students stayed in the university hostels.
- (b) In respect of Gujerati and Memon and to a lesser extent the Urdu group, a large majority resided on campus or within a 10 km radius of the university.
- (c) The other language groups were spread less favourably in terms of distance travelled to university.

TABLE 5.17

PERCENTAGE DISTRIBUTION OF HOME LANGUAGE OF FIRST-YEAR STUDENTS OVER  
COMMUTER DISTANCE (FROM PLACE OF RESIDENCE TO UNIVERSITY)

Home Language	Hostel	≤ 10 km	11-20 km	21-35 km	35+ km	Total	
	%	%	%	%	%	No.	%
Afrikaans	82,4	11,8	0	5,9	0	17	100
English	23,8	42,3	9,8	21,7	2,4	2083	100
English & Afrikaans	63,5	31,8	0,0	3,5	1,2	85	100
Gujerati	36,0	50,8	3,1	8,6	1,4	636	100
Hindi	14,7	44,7	7,8	27,5	5,3	374	100
Memon	29,5	60,0	4,2	4,2	2,1	95	100
Tamil	10,6	33,0	21,2	29,7	5,5	330	100
Telegu	8,8	26,5	14,7	44,1	5,9	102	100
Urdu	22,7	44,0	5,0	25,5	2,8	141	100

#### 5.2.10 Age (Chronological)

Table 5.18 (p. 152) shows the distribution of the ages of the students according to Faculty. The categories ranged from 17 years and under ( $\leq 17$ ), to 31 years and over ( $31^+$ ). Because of the small numbers of students over 22 years of age, particularly in the Faculties of Education, Law and Science, categories after 21 years were combined, as recommended by statisticians (Ferguson, 1966, 208; Downie and Heath, 1970, 207).



TABLE 5.18

PERCENTAGE AGE DISTRIBUTION OF FIRST-YEAR STUDENTS ACCORDING TO FACULTY AT THE UNIVERSITY OF DURBAN-WESTVILLE : 1971-1976

Faculty	Age in years									Total	
	≤ 17	18	19	20	21	22-25	26-30	31+	Not Indicated	No.	%
Arts	6,7	26,1	22,6	11,7	3,8	11,6	4,6	11,4	1,6	1133	100
Commerce	5,9	31,2	26,5	15,9	6,8	7,0	1,9	1,3	3,4	1029	100
Education	4,0	33,6	31,1	18,0	8,9	1,5	0,0	0,9	1,9	672	100
Law	6,5	30,7	33,3	17,6	7,2	3,3	0,0	0,0	1,3	153	100
Science	12,2	42,5	24,6	9,7	5,4	1,7	0,4	0,4	3,1	1133	100
Total	312	1371	1068	554	245	237	77	152	104	4120	100
%	7,6	33,3	25,9	13,4	5,9	5,8	1,9	3,7	2,5	100	100

The following observations and inferences are derived from the data in Table 5.18:

- (a) (i) One-third of the students (33,3%) were 18 years old on registration.
- (ii) 25,9% were 19 years old.
- (iii) Those in the older categories (22 and over) were mostly part-time students in the Faculties of Arts and Commerce.
- (iv) Of the younger students (19 and under) a greater percentage was enrolled with the Faculty of Science than with other Faculties.
- (v) Of the two Faculties that enrolled most of the older students (22 and over) the Faculty of Arts had more than Commerce.
- (b)  $\chi^2$  tests were conducted to establish whether significant differences existed in the age distributions over the five Faculties:
- (i)  $\chi^2$  for the age categories ranging from  $\leq 17$  to  $31^+$  for degree students was 478,04 ( $p < 0,001$ ). For degree students therefore, there were highly significant differences in the distribution of ages amongst Faculties. The Science Faculty had a significantly greater proportion of younger students than other Faculties. Law and Education Faculties had smaller proportions of older students than the Commerce and Arts Faculties which enrolled part-time students who are generally older than full-time students.
- (ii)  $\chi^2$  for diploma students was 10,03 ( $p > 0,05$ ). Therefore, the differences in age distributions among diploma students in the three Faculties of Arts, Commerce and Education were not significant.

- (c) The age distributions of degree students and diploma students at the University of Durban-Westville were tested for significant differences. The  $\chi^2$  value obtained was 93,60 ( $p < 0,001$ ). There were highly significant differences in the distribution of ages between degree and diploma students. Degree students had a significantly higher number of very young students (18 years and under) and a significantly greater number of older students (22 years and over) than Diploma students.
- (d)  $\chi^2$  was computed for male and female age distributions for all students (Degree and Diploma). The  $\chi^2$  value obtained was 86,69 ( $p < 0,001$ ). Female students were significantly younger than male students among first-years at the University of Durban-Westville.

#### 5.2.11. Matriculation status of students

Students were categorised according to the type of Senior Certificate obtained. Categories used were: Senior Certificate

- (a) with full matriculation exemption,
- (b) with conditional or mature age exemption,
- (c) without matriculation exemption.

See Table 5.19 (p. 155).



TABLE 5.19

MATRICULATION STATUS OF FIRST-YEAR STUDENTS AT THE UNIVERSITY OF DURBAN-WESTVILLE : 1971-1976

Status	No.	%	Male	Female	Full-Time	Part-Time	Degree		Diploma	
							No.	%	No.	%
Full Matriculation Exemption	3051	74,1	2156	895	2949	102	2933	96,1	118	3,9
Conditional or Mature Age Exemption	395	9,6	308	87	244	151	377	95,4	18	4,6
Senior Certificate Without Exemption	378	9,2	183	195	371	7	21	5,6	357	94,4
Not Indicated	296	7,2	219	77	257	39	225	76,4	71	23,6
Total	4120	100	2866	1254	3821	299	3556	86,3	564	13,7

The following observations emerge from Table 5.19:

- (a) Students with full matriculation exemption totalled 3051. This represented 74,1% of the total enrolment. This value could have been higher if some of those who had not indicated their status (296 students, i.e., 7,2%) had done so.
- (b) Of the remainder about half (9,6%) were admitted with conditional or mature age exemptions, while 9,2% had senior certificates without matriculation exemption.
- (c) Students with senior certificate without matriculation exemption formed the great majority studying for diplomas, particularly in the Faculty of Education.
- (d) Males comprised 71,0% of the students with full exemption and females 29,0%.
- (e) Part-time students accounted for only 3,3% of students with full exemption, but they represented a higher percentage - 38,2% of those with conditional or mature age exemption. There were no part-time diploma students.
- (f) Of the 563 diploma students only 118 or 21,0% had full matriculation exemption compared with the 2933 degree students (82,5%) out of a total of 3557.
- (g) Of the conditional and mature age exemption students 377 or 95,4% were degree students.
- (h) The situation was almost reversed amongst those without exemption where the diploma students numbered 357 or 94,4%.

The matriculation status data at the University of Durban-Westville compares unfavourably with those of students at White residential universities. Erens and Louw (1978, 64) provide data from which the

following percentages were calculated for the period 1971 to 1976 for White students at South African residential universities : of the 96185 first-year students 86311, i.e., 89,7%, had matriculation exemption certificates and 10,3% senior certificate without exemption. These figures are superior to those of 83,6% matriculation exemption certificates and 16,4% Senior Certificates without exemptions for those students at the University of Durban-Westville who had indicated their matriculation status for the period 1971-1976.

5.2.11.1. Matriculation Status of First-year students according to Province of Matriculation

The distribution according to Province of matriculation of first-year students for Natal, Transvaal and the Cape Province is shown in Table 5.20.

TABLE 5.20

HOME PROVINCE AND MATRICULATION STATUS OF FIRST-YEAR STUDENTS AT THE UNIVERSITY OF DURBAN-WESTVILLE : 1971-1976

Matriculation Status	Natal		Transvaal		Cape		Total	
	No.	%	No.	%	No.	%	No.	%
Full Matriculation Exemption	2307	70,9	530	86,7	167	86,1	3004	74,0
Conditional or Mature Age Exemption	305	9,4	35	5,7	6	3,1	346	8,5
Senior Certificate Without Exemption	353	10,9	8	1,3	9	4,6	370	9,1
Not Indicated	288	8,9	38	6,2	12	6,2	338	8,3
Total	3253	100	611	100	194	100	4058	100

According to Table 5.20 the full matriculation exemptions per Province were



as follows:

Transvaal	86,7%
Cape Province	86,1%
Natal	70,9%.

The Transvaal and Cape Province students were a more select group, which they had to be, to justify the expenditure of university study at a venue outside the province in which they resided. These students generally enrolled for degrees while a substantial number of Natal students without matriculation exemption, enrolled for diplomas.

#### 5.2.12. Matriculation Aggregate

Of the 4120 students in this study, 2927 (71,0%) indicated their matriculation aggregate (on the master cards). The distribution of these 2927 students' matriculation aggregates according to degrees, diplomas and total, are shown in Table 5.21 (p. 159).

The aggregate symbols have the following values:

A : 80% and over	E <sup>+</sup> : 45% - 49
B : 70% - 79%	E : 40% - 44%
C : 60% - 69%	F : 34% - 39%
D : 50% - 59%	

The following observations and inferences are made from Table 5.21:

- The 2927 students were distributed according to aggregates as follows:  
A - 1, B - 6, C - 198, D - 1296, E<sup>+</sup> - 1109, E - 287 and F - 30.
- A total of 317 students (10,8%) had obtained aggregates below E<sup>+</sup>.  
Of these 289 (91,2%) were diploma students.
- At the other end of the scale, of the 205 students (7,0%) who obtained

TABLE 5.21

MATRICULATION AGGREGATE IN RELATION TO DEGREES AND DIPLOMAS, FOR FIRST-YEAR STUDENTS AT THE UNIVERSITY OF DURBAN-WESTVILLE : 1971-1976

	Matriculation Aggregates												Total		
	A		B		C		D		E <sup>+</sup>		E			F	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.
Degree Total	1	0,04	6	0,2	198	8,1	1238	50,4	984	40,1	24	1,0	4	0,2	2455
Male	1	0,1	6	0,4	140	8,2	876	51,6	658	38,7	16	0,9	2	0,1	1699
Female	0	0	0	0	58	7,7	362	47,9	326	43,1	8	1,1	2	0,3	756
Diploma Total	0	0	0	0	0	0	58	12,3	125	26,5	263	55,7	26	5,5	472
Male	0	0	0	0	0	0	39	15,9	71	29,0	123	50,2	12	4,9	245
Female	0	0	0	0	0	0	19	8,4	54	23,8	140	61,7	14	6,2	227
Total Total	1	0,03	6	0,2	198	6,8	1296	44,3	1109	37,9	287	9,8	30	1,0	2927
Male	1	0,05	6	0,3	140	7,2	915	47,1	729	37,5	139	7,2	14	0,7	1944
Female	0	0	0	0	58	5,9	381	38,8	380	38,7	148	15,1	16	1,6	983

C aggregates or higher, all were degree students.

- (d) Even among the 1295 students with a D aggregate the diploma students were a small minority of 56 (4,3%).
- (e) In terms of matriculation aggregates the degree students were considerably superior to diploma students. This superiority was highly significant:  $\chi^2 = 1509,28$  ( $p < 0,001$ ).
- (f) The distribution of aggregates of male and female students of the total student population was compared. A  $\chi^2$  value of 59,13 ( $p < 0,001$ ) was obtained. There was a highly significant difference between the distributions of aggregates of male and female students. Male students had significantly better matriculation aggregates than female students.

Table 5.22 (p.161) shows the distribution of matriculation aggregates of students according to Faculty at the University of Durban-Westville.

Table 5.22 provides the following observations and inferences:

- (a) The distributions of aggregates in the Faculties of Arts and Commerce were more or less the same.
- (b) The Science Faculty carried the highest aggregates.
- (c) All E and F aggregates were in the Faculties of Arts, Commerce and Education which enrolled diploma students in addition to degree students.
- (d) A  $\chi^2$  was calculated for the above distribution. The  $\chi^2$  value was 356,36 ( $p < 0,001$ ). There are highly significant differences between the matriculation aggregates of the different Faculties, with Science having a higher percentage of students with superior aggregates, i.e., A, B, C and D aggregates.



TABLE 5.22

MATRICULATION AGGREGATES OF FIRST-YEAR STUDENTS ACCORDING TO FACULTY AT THE UNIVERSITY OF DURBAN-WESTVILLE : 1971-1976

Faculty	Aggregate Symbol												Total			
	A		B		C		D		E <sup>+</sup>		E				F	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Arts	0	0	1	0,2	25	3,8	276	41,8	300	45,4	39	5,9	20	3,0	661	100
Commerce	0	0	0	0	21	3,3	278	43,1	306	47,4	34	5,3	6	0,9	645	100
Education	0	0	1	0,2	10	1,7	175	29,1	196	32,7	214	35,7	4	0,7	600	100
Law	0	0	0	0,0	5	4,3	48	41,7	62	53,9	0	0	0	0	115	100
Science	1	0,1	4	0,4	137	15,1	519	57,3	245	27,0	0	0	0	0	906	100
Total	1	0,0	6	0,2	198	6,8	1296	44,3	1109	37,9	287	9,8	30	1,0	2927	100

- (e) Another  $\chi^2$  was taken for the Faculties of Arts, Commerce and Science. Omitted were Law with its small entries and Education which had a preponderance of F and E symbols. The  $\chi^2$  obtained was 206,83 ( $p < 0,001$ ). Science had a significantly better distribution of aggregates than Commerce or Arts.
- (f) Education was compared first with Arts and Commerce and then with Science,  $\chi^2$  for the former was 39,41 ( $p < 0,001$ ). The distributions of aggregates for Arts and Commerce were significantly superior to Education.  $\chi^2$  for the latter was 275,20 ( $p < 0,001$ ). The superiority of Science aggregates over Education was also highly significant.

#### 5.2.12.1. Matriculation Aggregate and Age (chronological) of students

Table 5.23 shows the distribution of matriculation aggregates over age of the total number of students.

TABLE 5.23

PERCENTAGE DISTRIBUTION OF MATRICULATION AGGREGATE ACCORDING TO AGE OF FIRST-YEAR STUDENTS AT THE UNIVERSITY OF DURBAN-WESTVILLE

Symbol	Age									Total	
	Not Indicated	≤ 17	18	19	20	21	22-25	26-30	31 <sup>+</sup>	No.	%
	%	%	%	%	%	%	%	%	%		
A	0,0	0,0	100,0	0,0	0,0	0,0	0,0	0,0	0,0	1	100
B	0,0	0,0	66,7	33,3	0,0	0,0	0,0	0,0	0,0	6	100
C	0,0	31,1	54,5	19,7	4,5	3,0	3,5	1,0	0,5	198	100
D	0,0	8,5	43,8	25,5	12,5	5,6	3,0	0,5	0,6	1296	100
E <sup>+</sup>	1,2	11,5	35,9	26,6	11,9	6,0	4,1	1,3	1,6	1109	100
E	0,3	3,8	26,8	27,9	25,4	10,1	4,5	1,7	0,3	287	100
F	3,3	3,3	36,7	40,0	10,0	3,3	3,3	0,0	0,0	30	100
Not Indicated	0,7	6,5	18,4	22,6	13,1	6,0	18,7	7,2	6,9	1193	100

According to Table 5.23:

- (a) A greater proportion of older students had E aggregates than E<sup>+</sup>, D or C aggregates;
- (b) Younger students were prominent among the higher aggregates.

A  $\chi^2$  was computed for the distribution of aggregate over age. The value of  $\chi^2$  was 64,44 ( $p < 0,001$ ). A significantly greater proportion of younger students obtained higher matriculation aggregates than older ones.

#### 5.2.12.2. Matriculation Aggregate and Home Province

The distribution of matriculation aggregates according to Home Province is contained in Table 5.24

TABLE 5.24

PERCENTAGE MATRICULATION AGGREGATES ACCORDING TO HOME PROVINCE OF FIRST-YEAR STUDENTS AT THE UNIVERSITY OF DURBAN-WESTVILLE

Province	Matriculation Aggregate							Total	
	A	B	C	D	E <sup>+</sup>	E	F	No.	%
	%	%	%	%	%	%	%		
Natal	0,04	0,2	5,9	39,6	41,7	11,3	1,1	2444	100
Transvaal	0,0	0,0	9,0	63,3	25,3	2,0	0,3	300	100
Cape	0,0	0,0	11,3	82,4	5,7	0,0	0,6	159	100
Other	0,0	0,0	50,0	25,0	25,0	0,0	0,0	12	100

(The "Other" category comprised private candidates and those from outside South Africa).



A  $\chi^2$  was computed to test if the differences in the distribution of aggregates over the three provinces were significant ("Other" excluded). A value of  $\chi^2 = 197,87$  ( $p < 0,001$ ) was obtained. Cape Province and Transvaal students, though small in numbers, had significantly greater proportions of students with superior matriculation aggregates than Natal students.

### 5.2.13. Matriculation Subjects

An analysis was made of the subjects taken for matriculation by the students at high school. A total of 2621 students indicated the subjects they took for the Senior Certificate/Matriculation Examination. They comprised 64% of all students. From those who had indicated the subjects taken, the distribution in Table 5.25 was compiled.

TABLE 5.25

MATRICULATION SUBJECTS TAKEN BY FIRST-YEAR STUDENTS AT THE UNIVERSITY OF DURBAN-WESTVILLE : 1971-1976

Subjects	No.	%	Subjects	No.	%
1 English	2621	100	10 Housecraft	64	2,4
2 Mathematics	2205	84,1	11 Domestic Science	43	1,6
3 Biology	1866	71,2	12 Economics	42	1,6
4 Afrikaans	1860	71,0	13 Commerce	23	0,9
5 Geography	1715	65,4	14 Business Economics	22	0,8
6 Accountancy	1143	43,6	15 Bookkeeping and Commercial Arithmetic	19	0,7
7 History	1082	41,3	16 Typing	11	0,4
8 Physical Science	869	33,2	17 Woodcraft	3	0,1
9 Latin	698	26,6	18 Other Subjects	2	0,1

According to Table 5.25:

- (a) The first 9 subjects dominated the students' matriculation curricula. Latin has since been almost phased out and replaced by Afrikaans;
- (b) Physical Science, although introduced recently at most schools, was assuming greater importance as a subject;
- (c) Accountancy, which was introduced as an alternative for History, appeared to enjoy the same popularity as History;
- (d) Mathematics was offered by most students and was second to English which is compulsory.

#### 5.2.14. Matriculation Subjects and Symbols According to Faculty

Table 5.26 (p. 166) shows the distribution of the symbols of the 8 principal subjects offered by first-year students: English, Mathematics, Biology, Afrikaans, Geography, Accountancy, History and Physical Science. The distribution is according to Faculty.

TABLE 5.26

PERCENTAGE DISTRIBUTION OF MATRICULATION SYMBOLS FOR SUBJECTS TAKEN BY FIRST-YEAR STUDENTS ACCORDING TO FACULTY AT THE UNIVERSITY OF DURBAN-WESTVILLE : 1971-1976

Matriculation Subjects	Faculty	Matriculation Symbols						Total	
		A	B	C	D	E	F	No.	%
		%	%	%	%	%	%		
English	Arts	0,5	1,7	12,2	39,6	45,3	0,7	581	100
	Commerce	0	0,2	1,6	25,9	71,3	1,1	564	100
	Education	0	0	3,5	32,9	63,1	0,5	577	100
	Law	0	0	5,7	40,6	53,8	0	106	100
	Science	0,1	0,6	7,8	36,8	54,6	0	793	100
	Total	0,2	0,6	6,4	34,4	58,0	0,4	2621	100
Mathematics	Arts	1,3	1,8	8,4	29,6	46,0	12,8	452	100
	Commerce	1,4	5,1	17,7	36,0	35,6	4,1	491	100
	Education	0,7	2,4	8,8	24,9	44,0	19,1	409	100
	Law	0	1,4	8,5	32,4	46,5	11,3	71	100
	Science	6,5	10,6	30,2	32,2	19,8	0,6	782	100
	Total	3,0	5,8	18,3	31,2	34,1	7,7	2205	100
Biology	Arts	0	0,9	9,9	33,6	49,7	5,9	443	100
	Commerce	0	0,3	6,4	34,2	52,7	6,4	389	100
	Education	0,2	0,5	5,2	25,8	52,3	16,1	442	100
	Law	0	6,9	11,1	26,4	50,0	5,6	72	100
	Science	0	1,7	20,4	43,8	31,7	2,3	520	100
	Total	0,1	1,1	11,0	34,5	45,9	7,4	1866	100
Afrikaans	Arts	0	0,8	6,3	23,8	57,8	11,2	365	100
	Commerce	0	0,5	2,3	14,1	66,7	16,4	396	100
	Education	0	0	2,2	20,2	58,4	19,2	411	100
	Law	0	0	4,3	20,7	63,0	12,0	92	100
	Science	0,2	1,5	5,5	22,3	64,8	5,7	596	100
	Total	0,1	0,8	4,2	20,3	62,3	12,4	1860	100



TABLE 5.26 (Continued)

PERCENTAGE DISTRIBUTION OF MATRICULATION SUBJECTS AND SYMBOLS PER FACULTY FOR THE UNIVERSITY OF DURBAN-WESTVILLE  
FIRST-YEAR STUDENTS : 1971-1976

Matriculation Subjects	Faculty	Matriculation Symbols						Total	
		A	B	C	D	E	F	No.	%
		%	%	%	%	%	%		
Geography	Arts	0,2	2,4	11,4	32,1	45,9	8,1	414	100
	Commerce	0	1,6	6,9	28,3	45,5	17,7	378	100
	Education	0	2,2	6,4	26,0	47,8	17,6	404	100
	Law	0	1,8	5,3	29,8	47,4	15,8	57	100
	Science	0,6	3,7	11,5	30,3	42,2	11,7	462	100
	Total	0,2	2,5	9,0	29,3	45,3	13,6	1715	100
Accountancy	Arts	3,7	5,6	19,9	41,6	24,8	4,3	161	100
	Commerce	4,3	16,8	35,9	29,9	12,5	0,6	345	100
	Education	1,8	8,2	23,2	36,4	25,9	4,5	220	100
	Law	2,1	0	31,3	33,3	29,2	4,2	48	100
	Science	7,8	0,6	34,2	39,5	16,0	1,9	319	100
	Total	4,7	8,0	30,3	35,9	18,8	2,5	1093	100
History	Arts	4,2	8,0	30,4	33,6	22,3	1,5	336	100
	Commerce	1,6	6,3	19,6	34,4	36,7	1,6	128	100
	Education	1,6	5,5	26,6	33,2	27,3	5,9	256	100
	Law	0	13,2	15,1	37,7	34,0	0	53	100
	Science	3,9	11,4	28,3	29,6	25,1	1,6	307	100
	Total	3,0	8,4	26,9	32,7	26,6	2,5	1080	100
Physical Science	Arts	0	0,8	11,7	31,3	48,4	7,8	128	100
	Commerce	0	1,2	12,2	40,2	43,9	2,4	164	100
	Education	0	1,0	9,8	34,3	40,2	14,7	102	100
	Law	0	4,0	8,0	28,0	48,0	12,0	25	100
	Science	2,7	6,2	30,7	37,8	21,1	1,6	450	100
	Total	1,4	3,8	21,3	36,6	32,5	4,3	869	100

The following observations are made from Table 5.26:

- (a) English : Compared with the other Faculties, Arts and Science had a higher percentage of students with superior symbols in English.
- (b) Mathematics : The Science Faculty enrolled students with the best symbols, followed by the Commerce Faculty.
- (c) Biology : Students in the Science Faculty had better symbols than students in the Arts Faculty, which had slightly superior symbols to the other Faculties.
- (d) Afrikaans : The Science Faculty students had the best symbols. Next came Arts, followed by the other Faculties.
- (e) Geography : The Faculties of Science and Arts enrolled better students than the other Faculties, with Science again ahead of Arts.
- (f) Accountancy : Commerce and Science Faculties were well ahead of the others with regard to the quality of Accountancy symbols of the students.
- (g) History : The Faculties of Arts and Science enrolled better History students than Education, but the Education Faculty was ahead of Commerce and Law.
- (h) Physical Science : The Science Faculty had a decisive lead over the others in respect of the quality of the Physical Science symbols of its students.

### 5.3. SUMMARY

First-year students involved in the longitudinal study that commenced in this chapter numbered 4120. Student data were punched onto cards and 7 sets of computer programmes were prepared - each set averaging about 10 programmes. The first set of programmes contributed to the analysis of data presented and discussed in this chapter, for the period 1971-1976.

Enrolment was analysed according to the variables listed below:

(a) Faculty

Enrolment was as follows: Arts 27,5%; Science 27,5%; Commerce 25,0%; Education 16,3%; Law 3,7%.

(b) Degree-Diploma

Enrolment was as follows: degree students comprised 86,4% of the total enrolment and diploma 13,6%. Both showed considerable growth but while degree students decreased from about 90% of total enrolment in 1971 to 80% in 1976, the diploma students increased from about 10% to 20% over the same period.

(c) Male-Female

Males comprised 69,5% of the enrolment and females 30,5%. Males outnumbered females in each Faculty, the differences being very large in Science, Commerce and Law.

(d) Full-Time-Part-Time

Full-time students made up 92,7% of the enrolment and part-time 7,3%. Part-time enrolment decreased sharply from 20,1% in 1971 to 3,9% in 1976.

(e) Study Directions

3-year Bachelor Degrees were most popular making up 67,5% of the enrolment; followed by 4-year degrees (15,7%) and 3-year diplomas (11,1%).

The 3-year Bachelor degree students were distributed almost equally over the Faculties of Arts, Commerce and Science.



(f) Commuter Distance to University

About 25% of the students resided in the University hostels; 42,7% lived within a 10km radius of the university, 20,3% in major suburbs like Chatsworth.

(g) Province of High School

Enrolment according to province was Natal 77,7%; Transvaal 14,8%; Cape Province 4,7%.

(h) Home Language

Of the 8 languages, the predominant ones were English 50,7%; Gujerati 15,4%; Hindi 9,1%; Tamil 8,1%.

(i) Age (Chronological)

About one-third of the students were 18 years of age when enrolling, and about one quarter were 19 years old. More older students enrolled in the Arts and Commerce Faculties. The Science Faculty enrolled the majority of the younger students. Degree students were generally younger than Diploma students. Female students were generally younger than male students.

(j) Matriculation Status

Of the total enrolment 71,4% had full matriculation exemption; 9,6% conditional or mature age exemption; 9,2% senior certificate without matriculation exemption; 7,2% had not indicated their matriculation status. Only 21% of the diploma students had full matriculation exemptions compared with 82,5% for degree students.

(k) Matriculation Aggregate

2927 students had indicated their aggregates as follows: A - 1; B - 6; C - 198; D - 1296; E<sup>+</sup> - 1109; E - 287; F - 30.

The Science Faculty students had the best aggregates, followed by Arts and Commerce. Younger students generally had better aggregates than older students.

(1) Matriculation Subjects

The matriculation subjects taken by the majority of students were:

English - 100% of the students; Mathematics - 84,9%; Biology - 71,2%  
Afrikaans - 71,0%; Geography - 65,4%; Accountancy - 43,6%;  
History - 41,3%; Physical Science - 33,2%; Latin - 22,6%.

(m) Matriculation Symbols per Faculty

Faculties which enrolled students with the best symbols in the above subjects were as follows:

English : Arts and Science Faculties had the best students;

Mathematics : Science Faculty had the best students, followed by  
Commerce;

Biology : Science Faculty, followed by Arts;

Afrikaans : Science Faculty, followed by Arts;

Geography : Science Faculty, followed by Arts;

Accountancy : Science and Commerce Faculties;

History : Arts and Science Faculties;

Physical Science : Science Faculty.

## CHAPTER SIX

### EXAMINATION RESULTS OF FIRST-YEAR STUDENTS : 1971-1976

The majority of studies on academic achievement at universities in South Africa, Great Britain and the United States of America, had concentrated on first-year students (See Chapter Two). Numerous studies have confirmed that students' academic results at university are worst in the first year. Therefore, with the analysis of the first-year enrolments of 1971-1976 completed in the previous Chapter (5) an analysis is made in this Chapter of first-year results of the students in this longitudinal study including:

- (a) the examination results of students in each subject offered at first-year level,
- (b) the number in each subject "refused Duly Performed Certificates" (to be referred to as "Xdps" henceforth),
- (c) the number of years taken by the 1971-1976 intakes of first-year students to pass first-year,
- (d) the number of students in the first-year "Pass" group and first-year "Fail" group,
- (e) the number of courses passed by students who failed or dropped out and
- (f) the academic performance of those who changed courses.

#### 6.1 FIRST-YEAR RESULTS ON SUBJECT BASIS

An analysis was made of the 90 subjects offered by the University at first-year level over the period 1971-1976. The results for each subject were recorded according to

- (i) the symbols obtained by students,



- (ii) number of Xdps,
- (iii) number of students passing the subject and
- (iv) number of students failing the subject.

A detailed analysis was made for all subjects on a Faculty basis. In view of the facts that

- (a) the list of subjects in some Faculties was very long and
- (b) a number of subjects had small student enrolment over the 6-year period,

the complete distribution was placed in Appendix 7, p. 391. In the tables that follow only those subjects taken by fifty or more students are given for each Faculty. The subjects are arranged in descending order of pass rate. The pass rate is given by the percentage of first-year students who gained promotion to the second year. The total includes students who were refused Duly Performed Certificates (Xdps). In this research an Xdp is regarded as a failure.

The count for the Xdps requires some explanation in view of the introduction of semester courses - by the Zoology department only in 1975 and in 1976 by the entire Faculty of Commerce and the following departments: Philosophy, Political Science and Criminology of the Arts Faculty; Computer Science, Zoology and Botany of the Science Faculty. The rest of the University held promotion examinations at the end of the year. For the Xdp count for semester courses, refusals of Duly Performed Certificates for both semesters were equated to one Xdp. A more detailed analysis and discussion of semester results, including semester Xdps, will be given in Chapter Seven where semester examination results are compared with non-semester examination results.

The discussion of first-year results follows on a Faculty basis. Table 6.1 contains data relating to the first-year students in the Faculty of Arts for the period 1971-1976. The subjects are arranged in descending order of percentage pass rate.

The following observations and inferences are made from Table 6.1 (p. 175).

- (a)(i) The average pass rate for the Arts subjects listed was 64%.
- (ii) The highest pass rate was in Special English which was taken by Engineering students only: 84,3%.
- Then followed: Speech and Drama and Communication 82,7%
- Practical English 79,8%
- Social Work 79,2%
- Anthropology 73,3%
- Sociology 72,0%
- Oriental Studies 70,7%.
- (iii) Subjects with pass rate between 60% and 70% were:
- Philosophy 69,8%
- Psychology 69,8%
- English 62,9%
- Criminology 61,2%.
- (iv) The pass rates of 4 subjects were between 50% and 60%:
- Physical Education 59,5%
- History 52,4%
- Practical Afrikaans 51,6%
- Art 50,8%.
- (v) Subjects with pass rate between 40% and 50% were:
- Geography 48,3%
- Political Science 47,4%.

TABLE 6.1

FACULTY OF ARTS - UNIVERSITY OF DURBAN-WESTVILLE : FIRST-YEAR SUBJECTS AND EXAMINATION RESULTS : 1971-1976

Subject	Symbols (Examination)								Total No.	Fail Group No.	Pass Group No.	Pass Rate %
	A	B	C	D	E <sup>+</sup>	E	< E	Xdps				
	(75-100%)	(70-74%)	(60-69%)	(50-59%)	(45-49%)	(40-44%)	(< 40%)					
Special English	1	5	10	32	4	2	1	2	57	9	48	84,2
Speech and Drama, and Communication	0	1	24	56	6	2	2	7	98	17	81	82,7
Practical English	2	4	104	706	110	41	12	43	1022	206	816	79,8
Social Work	1	2	24	53	12	4	1	4	101	21	80	79,2
Anthropology	1	0	18	25	3	4	7	2	60	16	44	73,3
Sociology	2	0	50	102	13	15	16	16	214	60	154	72,0
Oriental Studies	0	3	23	56	15	8	7	4	116	34	82	70,7
Philosophy	1	0	24	79	9	10	15	11	149	45	104	69,8
Psychology	2	10	88	170	41	38	29	9	387	117	270	69,8
English	0	1	41	404	95	77	59	32	709	263	446	62,9
Criminology	0	0	6	95	13	12	33	6	165	64	101	61,2
Physical Education	1	0	6	37	12	11	5	2	74	30	44	59,5
History	0	0	14	136	42	32	43	19	286	136	150	52,4
Practical Afrikaans	5	7	68	155	38	43	66	73	455	220	235	51,6
Art	2	2	9	19	6	14	6	5	63	31	32	50,8
Geography	1	5	14	50	14	27	32	2	145	75	70	48,3
Political Science	0	0	12	42	5	4	50	1	114	60	54	47,4
Afrikaans-Netherlands	0	1	12	11	4	7	16	6	57	33	24	42,1
Latin	0	0	7	29	7	16	26	11	96	60	36	37,5
Special Latin	5	4	26	41	15	17	35	97	240	164	76	31,7
Total									4608		2947	64,0

NOTE: Only subjects taken by 50 or more students are considered in Table 6.1. The complete list of Arts Subjects appears in Appendix 7, p. 391.



Afrikaans-Netherlands	42,1%.
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(vi) Subjects with pass rate below 40% were:

Latin	37,5%
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Special Latin	31,7%.
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(b)  $\chi^2$  was computed for the distribution of students who passed and those who failed in Arts courses listed in Table 6.1 excluding Special and Practical Courses. Xdps were included in the Fail Group.

$\chi^2 = 135,67$  ( $p < 0,001$ ). There were highly significant differences in the proportions of students passing first year and failing first year among the subjects in the Arts Faculty.

(c)  $\chi^2$  was computed for the distribution of first-year examination symbols for the various Arts Faculty subjects in Table 6.1 (p. 175). Practical and Special Courses were excluded. Xdps were included.

$\chi^2 = 363,33$  ( $p < 0,001$ ). There were highly significant differences in the distributions of examination symbols among the various first year Arts subjects.

Table 6.2 (p. 177) shows the distribution of symbols in the first-year examinations and other pass-fail data in the Faculty of Commerce. The subjects are arranged in descending order of percentage pass rate.

The following observations and inferences are derived from Table 6.2:

(a) The mean pass rate for the Commerce subjects listed in Table 6.2 was 55,1%.

(b) The subject with the highest pass rate was

	Public Administration :	73,0%
followed by:	Economics	69,7%
	Business Economics	56,4%
	Accounting	48,4%
	Statistics	38,5% .

TABLE 6.2

FACULTY OF COMMERCE - UNIVERSITY OF DURBAN-WESTVILLE : FIRST-YEAR SUBJECTS AND EXAMINATION RESULTS : 1971-1976

Subjects	Symbols (Examination)								Total No.	Fail Group No.	Pass Group No.	Pass Rate %
	A	B	C	D	E <sup>+</sup>	E	< E	Xdps				
	(75-100%)	(70-74%)	(60-69%)	(50-59%)	(45-49%)	(40-44%)	(< 40%)					
Public Administration	2	1	14	37	3	2	13	2	74	20	54	73,0
Economics	4	1	132	561	61	56	166	21	1002	304	698	69,7
Business Economics	3	6	133	349	68	74	180	57	870	379	491	56,4
Accounting	28	44	138	285	42	75	351	59	1022	527	495	48,4
Statistics	17	16	79	127	21	39	167	154	620	381	239	38,5
Total									3588		1977	55,1

NOTE: Only those subjects taken by 50 or more students are reflected in Table 6.2. (The complete list of Commerce subjects appears in Appendix 7, p. 392).

- (c) A  $\chi^2$  was calculated for the pass-fail distributions in Table 6.2. The fail group included Xdps.  $\chi^2 = 183,06$  ( $p < 0,001$ ). The proportions of students passing subjects in the Commerce Faculty differed significantly among the subjects listed in Table 6.2.
- (d) A  $\chi^2$  was calculated for the distribution of first-year examination symbols in the various subjects in Table 6.2. Xdps were included.  $\chi^2 = 327,09$  ( $p < 0,001$ ). Highly significant differences existed in the distribution of first-year examination symbols among the various Commerce subjects.

Table 6.3 (p. 179) shows the distribution of symbols of first-year examination results and other pass-fail data for the Faculty of Education. The subjects are arranged in descending order of percentage pass rate.

The following observations and inferences are made from Table 6.3:

- (a) The average pass rate for the Education subjects listed in Table 6.3 was 83,0%.
- (b) Education, taken as a degree course, had a pass rate of 71,2%.
- (c) (i) The pass rates for the Diploma subjects offered by the Faculty of Education were high with four subjects having pass rates of over 90%:

Physical Education	92,7%
History	92,5
Accounting	91,6
Education (Diploma)	90,7% .

- (ii) Four subjects had pass rates between 80% and 90%:

Art	89,1%
English	87,9%
Business Economics	87,5%
Geography	87,3% .



TABLE 6.3

FACULTY OF EDUCATION - UNIVERSITY OF DURBAN-WESTVILLE : FIRST-YEAR SUBJECTS AND EXAMINATION RESULTS : 1971-1976

Subjects	Symbols (Examinations)								Total No.	Fail Group No.	Pass Group No.	Pass Rate %
	A	B	C	D	E <sup>+</sup>	E	< E	Xdps				
	(75-100%)	(70-74%)	(60-69%)	(50-59%)	(45-49%)	(40-44%)	(< 40%)					
Physical Education	4	16	88	132	8	2	1	8	259	19	240	92,7
History	0	3	22	73	4	3	1	0	106	8	98	92,5
Accounting	9	11	31	25	3	2	2	0	83	7	76	91,6
Education((Diploma)	4	9	69	229	9	18	5	0	343	32	311	90,7
Art	2	2	14	31	4	2	0	0	55	6	49	89,1
English	5	18	101	175	18	13	10	0	340	41	299	87,9
Afrikaans	4	9	89	192	22	8	12	0	336	42	294	87,5
Business Economics	3	7	13	25	3	2	2	0	55	7	48	87,3
Geography	0	1	17	51	4	10	6	2	91	22	69	75,8
Education (Degree)	2	0	54	159	44	23	14	6	302	87	215	71,2
Mathematics	5	4	14	23	6	4	13	3	72	26	46	63,9
Afrikaans Elementer	5	2	7	20	3	8	5	6	56	22	34	60,7
Physical Science	0	1	7	19	5	4	14	1	51	24	27	52,9
Biology	0	0	2	18	10	6	12	2	50	30	20	40,0
Total									2199		1826	83,0

NOTE: Only those subjects taken by 50 or more students are reflected in Table 6.3. (The complete list of Education Subjects appears in Appendix 7, p. 393)

(iii) Two subjects with pass rates between 60% and 70% were:

Mathematics	63,9%
Afrikaans Elementêr	60,7%.

(iv) The subject with a pass rate between 50% and 60% was:

Physical Science	52,9%.
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(v) The subject with a pass rate between 40% and 50% was:

Biology	40%.
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(d) A  $\chi^2$  was calculated for the distribution of pass groups and fail groups among the subjects in Table 6.3. A  $\chi^2$  value of 227,00 ( $p < 0,001$ ) was obtained. There were highly significant differences among the pass rates of the various subjects in the Faculty of Education.

(e)  $\chi^2$  was calculated for the distribution of symbols of the Education Faculty subjects in Table 6.3. Xdps were included. A highly significant value was obtained:  $\chi^2 = 309,83$  ( $p < 0,001$ ). Symbols in the first-year examinations differed significantly among the subjects offered by the Faculty of Education.

Table 6.4 shows data pertaining to Private Law offered by the Law Faculty.

TABLE 6.4

FACULTY OF LAW - UNIVERSITY OF DURBAN-WESTVILLE : FIRST-YEAR SUBJECTS AND EXAMINATION RESULTS : 1971-1976

Subjects	Symbols (Examinations)								Total No.	Fail Group No.	Pass Group No.	Pass Rate %
	A	B	C	D	E <sup>+</sup>	E	< E	Xdps				
	(75- 100%)	(70- 74%)	(50- 69%)	(50- 59%)	(45- 49%)	(40- 44%)	(< 40%)					
Private Law	6	4	42	160	76	48	42	62	440	228	212	48,2

Of the subjects offered by the Law Faculty only Private Law had a total enrolment exceeding 50. The pass rate was 48,2%. (The complete list of Law subjects appears in Appendix 7, p. 394).

Table 6.5 (p. 182) shows the distribution of symbols and other pass-fail data from first-year examination results in the Science Faculty. The subjects are arranged in descending order of percentage pass rate.

The following observations and inferences are made from Table 6.5:

- (a) The average pass rate for the 9 Science subjects listed in Table 6.5 was 47,6%.
- (b) Only one subject, Physics IB, had a pass rate in excess of 60%, i.e., 60,6%.
- (c) Two first-year courses had pass rates between 50% and 60%:

Engineering Mathematics	53,9%
Statics, Dynamics and Mechanics	53,2%.

Both belonged to the Department of Engineering (Now Faculty of Engineering).

- (d) Subjects with pass rates between 40% and 50% were:

Chemistry	48,1%
Engineering Drawing	47,9%
Physiology IA	47,4%
Mathematics	46,2%
Botany	40,7%.

- (e) The subject with a pass rate below 40% was

Zoology	39,7%.
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- (f)  $\chi^2$  for the pass-fail distribution in Table 6.5 is highly significant.  $\chi^2 = 92,00$  ( $p < 0,001$ ). Among the subjects offered in the Faculty of Science there were significant differences between the proportions



TABLE 6.5

FACULTY OF SCIENCE - UNIVERSITY OF DURBAN-WESTVILLE : FIRST-YEAR SUBJECTS AND EXAMINATION RESULTS : 1971-1976

Subjects	Symbols (Examinations)								Total	Fail Group No.	Pass Group No.	Pass Rate %
	A	B	C	D	E <sup>+</sup>	E	<E	Xdps				
	(75-100%)	(70-74%)	(60-69%)	(50-59%)	(45-49%)	(40-44%)	(< 40%)					
Physics IB	37	41	148	358	60	100	91	129	964	380	584	60,6
Engineering Mathematics	12	5	12	19	4	8	14	15	89	41	48	53,9
Statics, Dynamics and Mechanics	6	2	10	23	1	5	21	9	77	36	41	53,2
Chemistry	23	32	134	296	104	131	152	137	1009	524	485	48,1
Engineering Drawing	1	3	13	18	1	14	18	5	73	38	35	47,9
Physiology IA	6	4	18	26	7	10	7	36	114	60	54	47,4
Mathematics	9	5	16	31	2	10	19	40	132	71	61	46,2
Botany	4	10	100	261	78	118	241	110	922	547	375	40,7
Zoology	13	16	91	243	67	67	221	197	915	552	363	39,7
Total									4295		2046	47,6

NOTE: Only those subjects taken by fifty or more students are shown in Table 6.5. (The complete list of Science subjects appears in Appendix 7, p. 394).

of students passing first year and students failing.

- (g) A  $\chi^2$  was calculated for the pass-fail distribution for the "pre-medical" courses Physics IB, Chemistry, Zoology and Botany.  $\chi^2 = 106,00$  ( $p < 0,001$ ). Among these four subjects significant differences existed in the proportions of students passing first year and students failing.
- (h) The  $\chi^2$  value for the distribution of symbols in Table 6.5 was highly significant.  $\chi^2 = 206,14$  ( $p < 0,001$ ). Xdps are included in the distribution.
- (i) For the "pre-medical" courses  $\chi^2 = 136,71$  ( $p < 0,001$ ). The  $\chi^2$  value was highly significant.

With the analysis of the first-year academic achievement on a subject basis completed, an analysis follows on a Faculty basis.

## 6.2. FIRST-YEAR RESULTS ON A FACULTY BASIS

The discussion is firstly for degrees, then for diplomas, and a comparison follows of the two.

### 6.2.1. First-Year Degree Results on a Faculty Basis

Table 6.6 (p. 184) shows the percentage distribution of first-year examination symbols for degree students on a Faculty basis for male, female and total. (Appendix 8, p. 396, contains the data used).  $\chi^2$  values were calculated using the actual numbers and not percentages.

TABLE 6.6

PERCENTAGE DISTRIBUTION OF FIRST-YEAR EXAMINATION SYMBOLS ACCORDING TO FACULTY AT THE UNIVERSITY OF DURBAN-WESTVILLE :  
DEGREE STUDENTS : 1971-1976

Faculty	Group	Symbols (Examinations)								Total	
		A	B	C	D	E <sup>+</sup>	E	< E	Xdps		
		(75-100%)	(70-74%)	(60-69%)	(50-59%)	(45-49%)	(40-44%)	(< 40%)		No.	%
Arts	Total	%	%	%	%	%	%	%	%		
Arts	Total	1,1	1,6	14,8	42,7	10,2	9	12	8,5	3661	100
	Male	0,8	1,4	12,4	39,5	11,3	9,5	14,4	10,7	1824	100
	Female	1,5	1,9	17,1	45,8	9,1	8,5	9,7	6,3	1837	100
Commerce	Total	1,4	1,8	13,2	41,3	7,3	7	18,7	9,3	4119	100
	Male	1,5	2	13,8	41,5	7,3	6,8	17,8	9,4	3583	100
	Female	0,4	1,1	9,1	40,3	7,1	8,4	24,8	8,8	536	100
Education	Total	0,4	0,6	11,0	48,7	8,2	10,1	13,8	7,2	1014	100
	Male	0,7	0,7	11,4	47,4	8	10,1	14,9	6,7	536	100
	Female	0	0,4	10,7	50,2	8,4	10	12,6	7,7	478	100
Law	Total	0,4	0,8	9,8	39,7	6,9	8,1	17,8	16,4	725	100
	Male	0,3	0,8	9,6	37,4	7,6	7,7	19,3	17,3	596	100
	Female	0,8	0,8	10,9	50,4	3,9	10,1	10,9	12,4	129	100
Science	Total	3,2	3,4	14,6	32,6	7,4	10,0	16,0	12,9	3786	100
	Male	3,9	3,9	15,6	32,0	7,4	9,7	15,2	12,3	2972	100
	Female	0,9	1,5	10,6	34,9	7,5	10,9	18,7	15,1	814	100
Total	Total	1,7	2,1	13,7	39,7	8,2	8,7	15,7	10,3	13305	100
	Male	2,0	2,3	13,7	38,2	8,1	8,4	16,3	10,9	9511	100
	Female	1,0	1,4	13,6	43,4	8,2	9,3	14,2	8,9	3794	100



The following observations and inferences are made from Table 6.6:

- (a)  $\chi^2$  was computed for the distribution of symbols for all students (total) over the five Faculties. Xdps were included. A value of 415,16 was obtained for  $\chi^2$  ( $p < 0,001$ ). Therefore, the Faculties of Arts and Education had significantly superior distributions of symbols than the Faculties of Law and Science.
- (b) Another  $\chi^2$  was calculated for the distributions of symbols for the totals of the five Faculties, with Xdps omitted.  $\chi^2 = 323,13$  ( $p < 0,001$ ). The significant differences found in (a) remained but because Law and Science had a greater proportion of Xdps among their symbols than the other Faculties, the omission of Xdps reduced the  $\chi^2$  value which, however, was still highly significant.
- (c)  $\chi^2$  tests were applied to the distribution of degree symbols according to the sex of the students, for each Faculty. The values of  $\chi^2$  were as follows:
- (i) Arts:  $\chi^2 = 70,66$  ( $p < 0,001$ ). The superiority of the distribution of symbols of females over those of the males was highly significant.
  - (ii) Commerce:  $\chi^2 = 25,86$  ( $p < 0,001$ ). In Commerce, the distribution of the symbols of male students was significantly superior to that of the females.
  - (iii) Education:  $\chi^2 = 4,87$  ( $p > 0,05$ ). The distribution of symbols in Education was not dependent on the sex of the student as  $\chi^2$  was not significant.
  - (iv) Law:  $\chi^2 = 13,76$  ( $p > 0,05$ ). In the Law Faculty there was no significant difference between the distributions of symbols for males and females.
  - (v) Science:  $\chi^2 = 51,76$  ( $p < 0,001$ ). Male students had a

significantly superior distribution of symbols than females in the Science Faculty.

- (d) Only 17,5% of the symbols were C or higher, which did not augur well in relation to prospects for good quality degrees and subsequent admission to honours and equivalent degrees.

#### 6.2.2. First-Year Diploma Results on Faculty Basis

Table 6.7 (p. 187) shows the percentage distribution of diploma examination symbols for the Faculties of Arts, Commerce and Education. Law and Science Faculties do not offer diplomas. (Appendix 8, p. 396, contains the data used).

A  $\chi^2$  test was applied to the distribution of symbols over the three Faculties and a value of 707,85 ( $p < 0,001$ ) was obtained. The Education Faculty had a significantly superior distribution of symbols than Commerce or Arts.

TABLEP 6.7

PERCENTAGE DISTRIBUTION OF FIRST-YEAR DIPLOMA EXAMINATION RESULTS ACCORDING TO FACULTIES AT THE UNIVERSITY OF DURBAN-WESTVILLE : 1971-1976

Faculty	Symbols								Total	
	A	B	C	D	E <sup>+</sup>	E	< E	Xdps		
	(75-100%)	(70-74%)	(60-69%)	(50-59%)	(45-49%)	(40-44%)	(< 40%)	Xdps	No.	%
	%	%	%	%	%	%	%	%	No.	%
Arts	1,7	1,0	8,5	28,2	9,2	11,9	20,1	19,4	294	100
Commerce	0,0	0,0	2,8	26,5	7,1	6,6	48,3	8,5	211	100
Education	2,0	4,1	24,1	51,7	5,8	5,1	5,5	1,8	2079	100
Total	1,8	3,4	20,5	47,0	6,3	6,0	10,7	4,3	2584	100



A  $\chi^2$  test was applied to the distribution of symbols over the three Faculties and a value of 707,85 ( $p < 0,001$ ) was obtained. The Education Faculty had a significantly superior distribution of symbols than Commerce or Arts.

### 6.2.3. A Comparison of the Distribution of Results for Degrees and Diplomas

Table 6.8 was compiled to show separately the distribution of symbols obtained by degree students and diploma students in the first-year examinations.

TABLE 6.8

PERCENTAGE DISTRIBUTION OF RESULTS OF DEGREE AND DIPLOMA FIRST-YEAR STUDENTS AT THE UNIVERSITY OF DURBAN-WESTVILLE : 1971-1976

Degree/ Diploma	Symbols								Total	
	A	B	C	D	E <sup>+</sup>	E	< E	Xdps		
	(75-100%)	(70-74%)	(60-69%)	(50-59%)	(45-49%)	(40-44%)	(< 40%)		No.	%
	%	%	%	%	%	%	%	%		
Degree	1,7	2,1	13,7	39,7	8,2	8,7	15,7	10,3	13305	100
Diploma	1,8	3,4	20,5	47,0	6,3	6,0	10,7	4,3	2584	100

For the distribution of symbols in Table 6,8, a  $\chi^2$  value of 262,03 ( $p < 0,001$ ) was obtained. Diploma symbols comprised a significantly better distribution than degree symbols. This was particularly so with regard to symbols lower than E, including Xdps.

In the next section the Xdps indicated in the earlier Tables are analysed further. Duly Performed Certificates form an important part of the

University's examination system. Students who are refused Duly Performed Certificates in any year, constitute failures for that year.

### 6.3. DULY PERFORMED CERTIFICATES OF FIRST-YEAR STUDENTS : 1971-1976

The Xdps of first-year students are analysed with relation to their distribution

- (a) over the entire University for the period 1971-1976 and
- (b) for each subject in each Faculty.

#### 6.3.1. Distribution of Xdps at the University of Durban-Westville : 1971-1976

An analysis was made of the number of Xdps received by first-year students. The Table below shows the number of students receiving 0; 1; 2; or more than 2. Xdps in their first year.

TABLE 6.9

#### DISTRIBUTION OF XDPS FOR FIRST-YEAR STUDENTS : 1971-1976

Year	Number of Xdp's								Total No.
	0		1		2		> 2		
	No.	%	No.	%	No.	%	No.	%	
1971	227	75,7	48	16,0	15	5,0	10	3,3	300
1972	137	41,6	132	40,1	44	13,4	16	4,9	329
1973	225	56,0	105	26,1	54	13,4	18	4,5	402
1974	175	47,0	124	33,3	44	11,8	29	7,8	372
1975	245	55,4	124	28,1	44	10,0	29	6,6	442
1976	268	53,4	162	32,3	50	10,0	22	4,4	502
1971-1976	1277	54,4	695	29,6	251	10,7	124	5,3	2347

Table 6.9 excludes those students who dropped out in their first year before Duly Performed Certificates were awarded. The following observations and inferences are derived from Table 6.9:

(a) Over the period 1971-1976

- (i) 54,4% of the students obtained maximum DP's,
- (ii) 29,6% were refused one DP,
- (iii) 10,7% were refused 2 DP's,
- (iv) 5,3% were refused more than 2 DP's.

(b) Altogether 45,6% of the first-year students had failed the course requirements in one or more subjects even before the scheduled examinations.

(c)  $\chi^2$  was computed to see if the distribution of Xdps varied significantly from year to year. A  $\chi^2$  value of 117,32 ( $p < 0,001$ ) was obtained for the period 1971-1976. Annual variations, therefore, were highly significant. Highly significant differences were mainly between those obtaining 0, and one Xdp respectively, each year.

(d) To ascertain whether the semester system influenced the significance of the variations found above, another  $\chi^2$  was calculated for 1971-1975, the period before the introduction of the semester system at the University. A value of 94,43 was obtained for  $\chi^2$  ( $p < 0,001$ ). Therefore, the significant annual variations in the Xdp distributions were not affected by the semester system.



### 6.3.2. Duly Performed Certificates According to Subjects in each Faculty

An analysis was made of the number of students taking each first-year subject offered by the University; together with the number of students refused Duly Performed Certificates over the period 1971-1976 in each subject. (A detailed analysis indicating each subject and the number of students who enrolled for each subject, is found in Appendix 9, p. 397). In the description and discussions that follow for each Faculty, only those subjects taken by fifty or more students have been selected.

Table 6.10 (p. 192) shows the distribution of Xdps for subjects in the Arts Faculty. Subjects have been listed in ascending order of magnitude of Xdp percentages.

TABLE 6.10

XDPS FOR FIRST-YEAR STUDENTS IN SUBJECTS WITH 50 OR MORE STUDENTS IN THE  
ARTS FACULTY : 1971-1976

Subjects	No. of Students	No. of Xdps	Percentage Xdps
Political Science	114	1	0,88
Geography	145	2	1,38
Physical Education	74	2	2,70
Anthropology	60	2	3,33
Oriental Studies	116	4	3,45
Special English	57	2	3,51
Criminology	165	6	3,64
Social Work	101	4	3,96
Practical English	1022	43	4,21
English	709	32	4,51
Psychology	387	19	4,91
History	286	19	6,64
Speech and Drama, and Communication	98	7	7,14
Philosophy	149	11	7,38
Sociology	214	16	7,48
Art	63	5	7,94
Afrikaans-Netherlands	57	6	10,53
Latin	96	11	11,46
Practical Afrikaans	455	73	16,04
Latin Special	240	97	40,42

According to Table 6.10, the number of Xdps for subjects in the Arts Faculty is generally low, except for certain Special and Practical Language subjects:

Latin Special:	40,42%
Practical Afrikaans:	16,04%.

Table 6.11 shows the distribution of Xdps in the Faculty of Commerce. The subjects have been listed in ascending order of magnitude of Xdp percentages.

TABLE 6.11

XDPS OF FIRST-YEAR STUDENTS IN SUBJECTS WITH 50 OR MORE STUDENTS IN THE COMMERCE FACULTY AT THE UNIVERSITY OF DURBAN-WESTVILLE : 1971-1976

Subject	Total Students	No. of Xdps	Percentage Xdps
Economics	1002	21	2,1
Public Administration	72	2	2,8
Accounting	1022	59	5,8
Business Economics	870	57	6,6
Statistics	620	154	24,8

The following observation and inference emerge from Table 6.11:

- (a) Except for Statistics which had a 24,8% Xdp count, Commerce subjects listed in Table 6.11 had low Xdp counts ranging from 2,1% for Economics to 6,6% for Business Economics.
- (b) The numbers of students awarded DP's in the subjects shown in Table 6.11 were compared with the numbers refused Xdps. The  $\chi^2$  value for this dichotomy was 292,50 ( $p < 0,001$ ). The difference between those student proportions refused DP's and those granted DP's varied significantly between subjects in the Commerce Faculty.



TABLE 6.12

XDPS FOR FIRST-YEAR STUDENTS IN SUBJECTS WITH 50 OR MORE STUDENTS IN THE EDUCATION FACULTY OF THE UNIVERSITY OF DURBAN-WESTVILLE : 1971-1976

Subjects	No. of Students	No. of Xdps	Percentage Xdps
History	106	0	0
Accounting	83	0	0
Education (Diploma)	343	0	0
Art	55	0	0
English	340	0	0
Afrikaans	336	0	0
Business Economics	55	0	0
Education (Degree)	302	6	2,0
Physical Science	51	1	2,0
Geography	91	2	2,2
Physical Education	259	8	3,1
Biology	50	2	4,0
Mathematics	72	3	4,2
Afrikaans Elementêr	56	6	10,7

Table 6.12 reveals that:

- (a) in 7 of the 14 subjects in the above table, students had been granted maximum DPs;
- (b) of the remaining 7, only Afrikaans Elementêr had a high rate of 10,7%. The remaining six ranged from 2,0% to 4,2%.

For the Faculty of Law no Table is provided as the only subject taken by more than 50 students was Private Law, where 62 of the 440 students were

refused DP's. This is a percentage of 14,1 - a relatively high figure when compared with those Faculties already considered.

Table 6.13 shows the distribution of Xdps for students in the Faculty of Science. Subjects are arranged in ascending order of magnitude of Xdp percentages.

Table 6.13

XDPS OF FIRST-YEAR STUDENTS IN SUBJECTS WITH 50 OR MORE STUDENTS IN THE SCIENCE FACULTY OF THE UNIVERSITY OF DURBAN-WESTVILLE : 1971-1976

Subject	No. of Students	No. of Xdps	Percentage Xdps
Engineering Drawing	73	5	6,8
Statics, Dynamics and Mechanics	77	9	11,7
Botany	922	110	11,9
Physics IB	964	129	13,4
Chemistry	1009	137	13,6
Engineering Mathematics	89	15	16,9
Zoology	915	197	21,5
Mathematics	132	40	30,3
Physics IA	114	36	31,6

The following observations and inferences flow from Table 6.13:

- (a) Xdp figures for Science subjects were higher than those for subjects in the Faculties of Arts, Commerce and Education. Further, there was a big range in the distribution from 6,8% for Engineering Drawing to 31,6% for Physics IA.
- (b)  $\chi^2$  was computed for the distribution of students refused DP's against

those awarded DP's in each subject. A  $\chi^2$  value of 75,53 ( $p < 0,001$ ) was obtained. Among the Science subjects there were highly significant differences between the proportions of students awarded DP's and those refused DP's.

- (c) In the four major departments of Botany, Physics (IB), Chemistry and Zoology, the figures were 11,9%; 13,4%; 13,6% and 21,5% respectively. Zoology had a higher percentage of Xdps than the other three.  $\chi^2$  for the proportions of DP's for these four departments is 40,90 ( $p < 0,001$ ). Highly significant differences existed amongst the DP awards of these departments.

6.4. THE NUMBER OF YEARS TAKEN BY FIRST-YEAR STUDENTS TO COMPLETE FIRST-YEAR COURSES, AND THE PERIOD SPENT BY UNSUCCESSFUL FIRST-YEAR STUDENTS BEFORE DROPPING OUT : 1971-1976

Table 6.14 (p. 197) shows the distribution of first-year students; the number of years taken by students to pass first year; and the number of years spent in first year by students who dropped out after unsuccessful examination attempts. Also indicated is the number of students who dropped out before Xdps were announced for the year and, therefore, before the first-year examinations.

The following observations and inferences are made from Table 6.14:

- (a) Of the 4120 first-year students
- (i) 510 students (12,4%) dropped out before Duly Performed Certificates were awarded, and hence before the first-year examinations;
  - (ii) A total of 1904 students (46,2%) passed first year at the first attempt;
  - (iii) Students who wrote and failed first-year examinations at the first attempt numbered 1706 (41,4%);



NUMBER OF YEARS SPENT IN FIRST-YEAR BY SUCCESSFUL AND UNSUCCESSFUL FIRST-YEAR STUDENTS : 1971-1976

Faculty	Degree/ Diploma	Drop outs Before Xdp Announce- ments		Pass Group				Fail Group				Total									
				Number of Years Taken to Pass First Year				Number of Years Spent in First Year Before Dropping Out													
				1	2	3	4	1	2	3	4										
				No.	%	No.	%	No.	%	No.	%		No.	%							
Arts	Degree	130	12,4	407	277	44	4	150	33	0	6	1051									
	Diploma	17	20,7	22	11	1	0	24	7	0	0	82									
	Total	147	13,0	429	288	45	4	174	40	0	6	1133									
Commerce	Degree	89	9,2	630	123	21	3	80	15	0	5	966									
	Diploma	23	36,5	22	3	0	0	12	3	0	0	63									
	Total	112	10,9	652	126	21	3	92	18	0	5	1029									
Education	Degree	32	12,6	126	56	5	1	28	5	0	0	253									
	Diploma	44	10,5	252	67	14	1	24	16	0	1	419									
	Total	76	11,3	378	123	19	2	52	21	0	1	672									
Law	Degree	8	5,2	67	42	11	1	18	6	0	0	153									
Science	Degree	167	14,7	378	304	13	1	178	90	0	2	1133									
Total		No.	%	No.	%	No.	%	No.	%	No.	%	No.	%								
	Degree	426	12,0	1608	45,2	802	22,6	94	2,6	10	0,3	454	12,8	149	4,2	0	0,0	13	0,4	3556	100
	Diploma	84	14,9	296	52,5	81	14,4	15	2,7	1	0,2	60	10,6	26	4,6	0	0,0	1	0,2	564	100
	Total	510	12,4	1904	46,2	883	21,4	109	2,6	11	0,3	514	12,5	175	4,3	0	0,0	14	0,3	4120	100

12,4%

70,5%

17,1%

- (iv) 883 students (21,4%) passed first year at the second attempt; 109 (2,6%) at the third attempt and 11 (0,3%) at the fourth attempt;
  - (v) eventually, of the total first-year intake of 4120 students 2907 (70,5%) succeeded in passing first year.
- (b) With regard to the drop-outs
- (i) 514 (12,5%) of the total first-year students failed the first year and dropped out at the end of that year;
  - (ii) 175 students (4,3%) attempted the first-year examinations for a second time and dropped out after failing;
  - (iii) 14 students (0,3%) attempted the first year unsuccessfully for the fourth time and dropped out;
  - (iv) ultimately, of the total 4120 students 703 (17,1%) dropped out after failing first-year examinations after one or more attempts.
- (c) The data for degrees and diplomas did not vary considerably, except for the number passing the first year at the first and second attempts respectively. While 296 diploma students (52,5%) passed the first year at the first attempt, only 1608 of degree students (45,2%) did so. However, of the students passing first year at the second attempt, the degree students numbered 802 (22,6%) and the diploma 81 (14,4%). It is interesting to note that if the criterion "one or two years" to pass first year is considered, the degree students number 2410 (67,8%) and the diploma 377 (66,9%). Therefore, over a two-year period, about the same percentage of degree and diploma students passed the first year.
- (d) First-year drop-outs were compared with first-year persisters. The distribution of first-year drop-outs, i.e., first-year students who dropped out before the first-year DP announcements (and subsequent

examinations), and first-year persisters, i.e., students who stayed on for DP awards and examinations were tested on a Faculty basis for significant differences. These tests were conducted separately for degrees and diplomas.

- (i) For degree students a  $\chi^2$  value of 22,04 ( $p < 0,001$ ) was obtained. There were significant differences in the proportions of persisters and drop-outs amongst the five Faculties. For drop-outs the Faculties of Law (5,2%) and Commerce (9,2%) differed significantly from Arts (12,4%), Education (12,6%) and Science (14,7%).
  - (ii) For diplomas the  $\chi^2$  value was 31,27 ( $p < 0,001$ ). There were significantly fewer drop-outs in the Faculty of Education (10,5%) than in the Faculties of Commerce (36,5%) and Arts (20,7%).
- (e)  $\chi^2$  tests were made on Faculty distributions of those who failed and dropped out at the end of the first year, and those who persisted by returning to attempt the first year again:
- (i) For degree students a  $\chi^2$  value of 26,4% ( $p > 0,05$ ) was obtained. The difference between those failing and dropping out at the end of the first year and those failing and returning to attempt the first year again was not significant among Faculties.
  - (ii) For diploma students a  $\chi^2$  value of 28,06 ( $p < 0,001$ ) was obtained. A significantly greater proportion of Education diploma students returned after failing the first year at the first attempt than did students in Arts and Commerce.
- (f) For the degree, of 1525 students who failed the first year at the first attempt 454 (29,8%) dropped out at the end of the first year, while 1071 students (70,2%) returned to University to attempt the first year again.
- (g) The distributions of students taking one, two, three or four years



to pass first year in each Faculty were tested for significant differences:

- (i) For degree students in the five Faculties a  $\chi^2$  of 187,45 ( $p < 0,001$ ) was obtained. The proportion of students taking one, two, three or four years to pass, differed significantly from Faculty to Faculty, with Commerce Faculty students in particular, being more successful than others. Education was second to Commerce. The remaining Faculties were further behind.
- (ii) Because the Commerce Faculty required passes in at least two subjects before the students may enter the second year, a fresh  $\chi^2$  was calculated with the Faculty of Commerce omitted. A  $\chi^2$  of 37,66, though less than the figure of 187,45 for all five Faculties, was again significant ( $p < 0,001$ ). The differences in the proportions were again significant with Education Faculty students being more successful than other Faculties, especially Science.
- (iii) The  $\chi^2$  for diplomas was 3,51 ( $p > 0,05$ ). No significant differences existed for diplomas.

In the next section data relating to students

- (a) passing first year at the first attempt ("Pass" Group) and
- (b) failing first year at the first attempt ("Fail" Group) are tabulated, and discussed.

#### 6.5 FIRST-YEAR PASS GROUPS AND FAIL GROUPS

Table 6.15 (p. 201) shows the distribution of the Pass Group for the period 1971-1976, i.e., students passing the first year at the first attempt according to : Faculty, part-time, full-time, sex, degree or diploma.

TABLE 6.15

PASS GROUPS FROM 1971-1976 FIRST-YEAR STUDENTS AT THE UNIVERSITY OF DURBAN-WESTVILLE ACCORDING TO: FACULTY, DEGREE OR DIPLOMA, TOTAL, SEX, FULL-TIME OR PART-TIME

Faculty	Degree/ Diploma	Total	Full-Time			Part-Time			Total	
			Total	Male	Female	Total	Male	Female	Male	Female
Arts	Degree	407	343	135	208	64	47	17	182	225
	Diploma	22	22	14	8	-	-	-	14	8
	Total	429	365	149	216	64	47	17	196	233
Commerce	Degree	630	604	532	72	26	23	3	555	75
	Diploma	22	22	19	3	-	-	-	19	3
	Total	652	626	551	75	26	23	3	574	78
Education	Degree	123	123	66	57	-	-	-	66	57
	Diploma	255	255	133	122	-	-	-	133	122
	Total	378	378	199	179	-	-	-	199	179
Law	Degree	67	67	51	16	-	-	-	51	16
Science	Degree	378	378	305	73	-	-	-	305	73
Total	Degree	1605	1515	1089	426	90	70	20	1159	446
	Diploma	299	299	166	133	-	-	-	166	133
	Degree and Diploma	1904	1814	1255	559	90	70	20	1325	579

NOTE: (i) The Faculties of Law and Science do not offer diplomas.  
(ii) There are no part-time students for the diplomas.

The following observations are made from Table 6.15:

(a) (i) Of the diploma students passing first year the Education Faculty had considerably larger numbers than the Faculties of Arts and Commerce.

(ii) Among degree students, the numbers passing per Faculty were as follows:

Commerce	630	(39,3% of first year passes)
Arts	407	(25,4%)
Science	378	(23,6%)
Education	123	(7,7%)
Law	67	(4,2%)

(b) As far as the distribution of the sexes is concerned, the male and female percentages passing according to Faculty were:

(i) Arts:	Male	182	(44,7%)
	Female	225	(55,3%);
(ii) Education:	Male	199	(52,6%)
	Female	179	(47,4%);
(iii) Commerce:	Male	578	(88,1%)
	Female	78	(11,9%);
(iv) Science:	Male	305	(80,7%)
	Female	73	(19,3%);
(v) Law	Male	51	(76,1%)
	Female	16	(23,9%).

The above statistics are not surprising when enrolment per Faculty according to the sex of the student is taken into account. Females outnumbered male first-year students in the Faculty of Arts. There was a more equitable distribution of male and female students in the Faculty of Education while in the remaining Faculties males outnumbered females



by big margins. (See Chapter 5).

- (c) Part-time students made up a very small percentage (5,6%) of the pass group. Of the 1605 students who passed the first year 1515 (94,4%) were full-time.

Table 6.16 (p. 204) shows the distribution for the Fail group, which comprised students who did not pass first year at the first attempt.

Table 6.16 reveals the following information:

- (a) The Fail Group numbered 2216, with degree students numbering 1951 and diploma students 265.
- (b) Much of the pattern reflected by the distribution of the Pass Group in Table 6.15 re-appeared for the Fail Group in Table 6.16.
- (c) The single major exception was that while Commerce outnumbered the other Faculties in the Pass Group, the number (377) in the Fail Group was considerably lower than Arts (704) and Science (755). This is not surprising when one considers that for promotion to the second year the Commerce Faculty required a pass in at least two first-year subjects, while the other Faculties required a pass in at least three subjects.

Drop-out or failure in the first year has often been described as wastage-academic and otherwise. This, of course, is not entirely true as the student gains from exposure to a variety of factors influencing him while he is at university, in particular, the academic acquisition from lecture and study. To gain a statistical perspective of this, an analysis was made in the following section of the examination results of drop-outs.

TABLE 6.16

FAIL GROUP FROM THE 1971-1976 FIRST-YEAR STUDENTS AT THE UNIVERSITY OF DURBAN-WESTVILLE ACCORDING TO FACULTY, DEGREE OR DIPLOMA, TOTAL, FULL-TIME OR PART-TIME, SEX

Faculty	Degree/ Diploma	Total	Full-Time			Part-Time			Total	
			Total	Male	Female	Total	Male	Female	Male	Female
Arts	Degree	644	471	261	210	173	134	39	395	249
	Diploma	60	60	23	37	-	-	-	23	37
	Total	704	531	284	247	173	134	39	418	286
Commerce	Degree	336	300	250	50	36	34	2	284	52
	Diploma	41	41	33	8	-	-	-	33	8
	Total	377	341	283	58	36	34	2	317	60
Education	Degree	130	130	72	58	-	-	-	72	58
	Diploma	164	164	84	80	-	-	-	84	80
	Total	294	294	156	138	-	-	-	156	138
Law	Degree	86	86	74	12	-	-	-	74	12
Science	Degree	755	755	582	173	-	-	-	582	173
Total	Degree	1951	1742	1239	503	209	168	41	1407	544
Total	Diploma	265	265	140	125	-	-	-	140	125
Total	Degree and Diploma	2216	2007	1379	628	209	168	41	1547	669

### 6.6. NUMBER OF COURSES PASSED BY DROP-OUTS OF THE FIRST YEAR

An analysis was made of the number of courses passed by students who dropped out during or at the end of the first year. Table 6.17 shows the distribution.

TABLE 6.17

NUMBER OF COURSES PASSED BY FIRST-YEAR DROPOUTS OF 1971-1976

No. of Courses Passed	Group	Males		Females		Total	
	Students Who	No.	%	No.	%	No.	%
0	Dropped out in first semester	254	20,6	197	77,6	57	22,4
0	Dropped out before DP awards were announced	256	20,8	184	71,9	72	28,1
0	Wrote First-Year examinations	208	16,9	147	70,7	61	29,3
1	Wrote First-Year examinations	164	13,3	122	74,4	42	25,6
2	Wrote First-Year examinations	127	10,3	92	70,4	35	27,6
> 2	Wrote First-Year examinations	222	18,0	168	75,7	54	24,3
Total		1231	100	910	73,9	321	26,1

Table 6.17 reveals the following information:

- (a) Of the 1231 students who dropped out in the first year
  - (i) 718 students (58,3%) left the university in their first year without having passed any courses,
  - (ii) another 513 students (41,7%) obtained one or more credits,
  - (iii) of the 718 students with no credits 510 dropped out before Xdps were announced,
  - (iv) 208 failed all courses,
  - (v) of the 513 with credits



164 had one credit,  
127 had two credits and  
222 had more than two credits.

- (b) The group of 222 with more than two credits included
- (i) students in the Faculty of Education where diploma students have to pass all courses (six) to gain promotion,
  - (ii) science students who passed the "pre-medical" courses, i.e., Physics I, Chemistry I, Zoology I and Botany I and then transferred to the Medical or Dental Faculties of other universities,
  - (iii) students who passed the first year and then dropped out for some reason or other.

In the concluding section, a study is made of the achievement of students who changed their direction of study in the second year, after having failed in the first year. These were students who chose new first-year courses, often in another Faculty.

#### 6.7. CHANGE IN STUDY DIRECTION AND PASSING OR FAILING FIRST YEAR IN THE SECOND CONSECUTIVE YEAR OF STUDY

Table 6.18 (p. 207) shows the distribution of results of students repeating first year but who changed their direction of study in their second consecutive year at University.

TABLE 6.18

FIRST-YEAR RESULTS OF STUDENTS WHO CHANGED DIRECTION OF STUDY IN SECOND CONSECUTIVE YEAR AT UNIVERSITY

Degree or Diploma	No. Changing Course	Pass Group		Fail Group	
		No.	%	No.	%
Degree	529	138	26,1	391	73,9
Diploma	87	28	32,2	59	67,8
Total	616	166	26,9	450	73,1

The following observations and inferences are derived from Table 6.18:

- (a) A  $\chi^2$  test was applied to the distribution of degree students and a value of 120,77 ( $p < 0,001$ ) was obtained. A significantly greater proportion of course-change students (73,9%) failed their second attempt at the first year in their new direction of study.
- (b) A  $\chi^2$  test was applied to the distribution of diploma students. A value of 10,93 ( $p < 0,001$ ) was obtained. Therefore, a significantly greater proportion of course-change students (67,8%) failed the second attempt at first year in a new study direction.
- (c) A  $\chi^2$  was also calculated to ascertain whether a significant difference existed between degree students and diploma students with regard to changing study directions and passing or failing. A  $\chi^2$  of 1,41 ( $p > 0,05$ ) was obtained. There was therefore, no significant difference between degree and diploma students.

#### 6.8. SUMMARY

This chapter analysed the examination results of first-year students at the University of Durban-Westville for the period 1971-1976. The principal

findings are listed below.

Pass Rates for Subjects taken by 50 or more students are as follows, according to Faculties: Arts subjects had a range from 31,7% for Latin Special to 84,2% for Special English; with a mean pass rate of 60,4%. Commerce subjects had a range from 38,5% for Statistics to 73% for Public Administration; with a mean pass rate of 55,1%. Education subjects had a range from 40,0% for Biology to 92,7% for Physical Education; with a mean pass rate of 83,0%. For Law subjects only Private Law had 50<sup>+</sup> students. The mean pass rate was 48,2%. Science subjects had a range from 39,7% for Zoology to 60,6% for Physics IB; with a mean pass rate of 47,6%.

Distribution of Examination Symbols according to Faculty:

Degree: Arts and Education Faculties were significantly superior to those of Law and Science.

Diploma: The distribution of symbols in the Education Faculty was significantly superior to that in Commerce and Arts.

Distribution of Degree Symbols according to Sex of Student: In the Arts Faculty the distribution of symbols of female students was significantly better than that of the males. In Commerce and Science however, distribution of symbols for males was significantly superior to that of females. No significant differences were found among the sexes for the Law and Education Faculties.

Diploma–Degree Distribution of Symbols: The distribution of symbols for diplomas was significantly superior to that for degrees.

Duly Performed Certificates: 54,4% of the students obtained maximum DP's; 29,6% were refused 1 DP; 10,7%, 2 DP's and 5,3% more than 2 DP's. The distribution of Xdps varied significantly from year to year. Xdps were generally low in the Faculty of Arts with most subjects having less than



10% Xdps. Commerce Xdps were also low, except for Statistics (24,8%). Education Xdps were very low with most subjects below 5%. Private Law had 14,1% Xdps. Science Faculty Xdps were high, generally over 10%, with Zoology, Mathematics and Physiology IA exceeding 20%.

Number of years spent in first year: 510 students (12,4%) dropped out before the announcement of DP awards. Of those passing first year 1904 (46,2%) passed at the first attempt; 833 (21,4%) at the second attempt; 109 (2,6%) at the third attempt and 11 (0,3%) at the fourth attempt. Eventually 2907 students (70,5%) passed first year. Those who failed first year at the first attempt numbered 1706 (41,4%). Of the drop-outs 514 failed first year at the first attempt and dropped out, 175 (4,3%) dropped out after failing the first year at the second attempt, 14 (0,3%) dropped out after the fourth attempt. Altogether 703 students dropped out after failing the first year at the first, second or fourth attempt.

First Year Pass Group and Fail Group: The Pass Group numbered 1904 with 630 students in the Commerce Faculty; 407 in Arts; 378 in Science; 123 in Education and 67 in Law. The Fail Group numbered 2206; with 755 students in the Science Faculty; 704 in Arts; 377 in Commerce; 294 in Education and 86 in Law.

Number of Courses passed by First-Year Drop-outs: 718 students left with no courses to their credit. Of these, 510 dropped out before Duly Performed Certificates were awarded and 208 failed the examinations. A total of 513 drop-outs passed one or more courses. Of these 164 passed one course, 127 two courses and 222 two or more courses.

Changing Study Direction and Passing or Failing: Among degree students 529 changed courses in the second year after failing the first year and of these 26,1% passed. Among diploma students who changed courses 32,2%

passed. In both cases the proportions of students failing were significantly greater than for those passing.

CHAPTER SEVENFACTORS PREDICTING PASSING OR FAILING FIRST YEAR AT THE UNIVERSITY OF DURBAN-WESTVILLE

With the numbers and profiles of the first-year "Pass" group and "Fail" group established in the previous chapter, the two groups are compared in this chapter in respect of a number of factors on which information was available. The comparison was intended to identify those factors that predicted passing or failing first year. The factors analysed were the following:

- (a) Degree student or diploma student,
- (b) Faculty of study,
- (c) Part-time student or Full-time student,
- (d) Sex of student,
- (e) Province in which student wrote matriculation examination,
- (f) Distance between university and student's place of residence (commuter distance),
- (g) Student's home language,
- (h) Age of student (chronological),
- (i) Matriculation status of student,
- (j) Matriculation aggregate obtained by student,
- (k) Matriculation subjects passed by student,
- (l) Matriculation symbols obtained by student,
- (m) Number of courses enrolled for by student,
- (n) Subjects taken at university, which had also been taken at matriculation level,
- (o) The Semester system.



Table 7.1 (p. 213) shows the distribution of the Pass Group and Fail Group for first-year students of 1971-1976 at the University of Durban-Westville according to male, female, full-time, part-time, degree, diploma and total.

#### 7.1. DEGREE OR DIPLOMA ENROLLED FOR, AND PASSING OR FAILING FIRST YEAR

Data from Table 7.1 reveal that the ratio of Pass : Fail for degree students is 1605 (45,1%) : 1951 (54,9%); while that for diploma is 299 (53,0%) : 265 (47,0%). More degree students fail than pass while more diploma students pass than fail. The proportions of Passing and Failing students for degree and diploma was tested by  $\chi^2$ .

A value of 12,16 ( $p < 0,001$ ) was obtained. A significantly greater proportion of diploma students (53,0%) passed first year than did degree students (45,1%).

#### 7.2. FACULTY OF STUDY AND PASSING OR FAILING FIRST YEAR

(a) Calculations from the data in Table 7.1 provided the following percentage passes for first-year degree students according to Faculty at the University of Durban-Westville:

Commerce	65,2%
Education	48,6%
Law	43,8%
Arts	38,7%
Science	33,4%

The differences in the pass rates of the five Faculties were subjected to a  $\chi^2$  test and a value of 239,52 ( $p < 0,001$ ) was obtained. The differences were highly significant.

(b) Because the Commerce Faculty required passes in two courses only for promotion to second year, a new  $\chi^2$  was computed for degree students

TABLE 7.1

DISTRIBUTION OF PASS GROUP AND FAIL GROUP OF FIRST-YEAR STUDENTS AT THE UNIVERSITY OF DURBAN-WESTVILLE FOR THE PERIOD 1971-1976 ACCORDING TO DEGREE, DIPLOMA, MALE, FEMALE, FULL-TIME, PART-TIME

Faculty	Degree/ Diploma	Pass Group					Fail Group				
		Total	Male	Female	Full- Time	Part- Time	Total	Male	Female	Full- TIME	Part- TIME
Arts	Degree	407	182	225	343	64	644	395	249	471	173
	Diploma	22	14	8	22	-	60	23	37	60	-
	Total	429	196	233	365	64	704	418	286	531	173
Commerce	Degree	630	555	75	604	26	336	284	52	300	36
	Diploma	22	19	3	22	-	41	33	8	41	-
	Total	652	574	78	626	26	377	317	60	341	36
Education	Degree	123	66	57	123	-	130	72	58	130	-
	Diploma	255	133	122	255	-	164	84	80	164	-
	Total	378	199	179	378	-	294	156	138	294	-
Law	Degree	67	51	16	67	-	86	74	12	86	-
Science	Degree	378	305	73	378	-	755	582	173	755	-
Total	Degree	1605	1159	446	1515	90	1951	1407	544	1742	209
	Diploma	299	166	133	299	-	265	140	265	125	-
	Total	1904	1325	579	1814	90	2216	1547	669	2007	209

with the Commerce Faculty excluded. The new  $\chi^2 = 24,81$  ( $p < 0,001$ ).

The differences in the proportions of passing and failing students among the four remaining Faculties were still highly significant.

(c) Table 7.1 contains the passes per Faculty for diplomas. When expressed as percentages they read:

(i) Education	60,9%
(ii) Commerce	34,9%
(iii) Arts	26,8%.

A  $\chi^2$  was calculated for the proportions of diploma students passing first year and failing first year according to Faculty. The value of  $\chi^2$  obtained was 41,20 ( $p < 0,001$ ). The pass-fail proportions amongst diploma students were significantly different in the three Faculties concerned.

### 7.3. PART-TIME STUDENTS AND FULL-TIME STUDENTS; AND PASSING OR FAILING FIRST YEAR

While all five Faculties at the University of Durban-Westville offered full-time courses for first-year students, only the Faculties of Arts and Commerce offered part-time courses for first-year students.

Therefore when comparing the performance of full-time students with part-time students only the Faculties of Arts and Commerce were considered. See Table 7.1.

The following observations and inferences are made from Table 7.1:

- (a) (i) Of the full-time degree students in the Faculties of Arts and Commerce 947 (55,1%) passed and 771 (44,9%) failed first year.
- (ii) Of the part-time degree students in these two Faculties 90 (30,1%) passed and 209 (69,9%) failed first year.



- (b) From the above it was obvious that full-time students were far more successful than part-time. This was confirmed by a  $\chi^2$  of 63,83 ( $p < 0,001$ ). The difference was highly significant.
- (c) For Arts only,  $\chi^2$  had a value of 17,72 ( $p < 0,001$ ). Full-time Arts students were significantly more successful (42,1% passing first year) than part-time (27,0% passing first year). The  $\chi^2$  value for Commerce was 15,83 ( $p < 0,001$ ). A significantly greater proportion of full-time Commerce students (66,8%) passed first year compared with part-time students (41,9%).

#### 7.4 THE SEX OF THE STUDENTS IN RELATION TO PASSING OR FAILING FIRST YEAR

Data relating to the sex of students and performance, are contained in Table 7.1 from which the following observations and inferences are made:

- (a) (i) Among male students 1325 (46,1%) passed first year and 1547 (53,9%) failed.
- (ii) For female students the figures were 579 (46,4%) passes and 669 (53,6%) failures.
- (b) The percentages of students passing first year and failing first year were almost identical for males and females. This was confirmed by a  $\chi^2$  of 0,02 ( $p > 0,05$ ).
- (c)  $\chi^2$  was also calculated for pass-fail proportions for male and female students in each Faculty.  $\chi^2$  was significant only for the Faculty of Arts.  $\chi^2 = 7,82$  ( $p < 0,001$ ). Significantly more females than males passed first year in the Faculty of Arts. Similar results were obtained by Erens (1977, 20) who found that among first-year White students in South Africa female students performed significantly better than male students in the Faculty of Arts. The finding that the sex of the students was not a significant factor for passing or

failing first-year in the remaining Faculties at the University of Durban-Westville was compatible with the research results of Gounden (1977, 129) who established that for degree students in the Education Faculty at the University of Durban-Westville, success or failure in the first year was independent of the sex of the student.

#### 7.5. PROVINCE OF MATRICULATION, RURAL OR URBAN NATURE OF HIGH SCHOOL, AND PASSING OR FAILING FIRST YEAR

Students entering the University of Durban-Westville wrote their matriculation examinations in Natal, the Transvaal and Cape Province. There was a very small number of private students and an even smaller number with qualifications from outside South Africa.

A distribution of first-year students according to Province of matriculation, male or female, degree or diploma, is shown in Appendix 10, p. 400.

##### 7.5.1. Home Province and Passing or Failing First Year

Table 7.2 shows the distribution of Passing and Failing students according to home province.

TABLE 7.2

PASS GROUPS AND FAIL GROUPS ACCORDING TO HOME PROVINCE

Province	Pass Group		Fail Group		Total	
	No.	%	No.	%	No.	%
Natal	1462	45,6	1741	54,4	3203	100
Transvaal	313	51,2	298	48,8	611	100
Cape	86	44,3	108	55,7	194	100
Other	24	40,0	36	60	60	100
Not Indicated	19	36,5	33	63,5	52	100

( The "Other" group comprises private students and students from outside South Africa).

The following observations and inferences are made from Table 7.2:

(a) Pass rates according to province were:

Transvaal	51,2%
Natal	45,6%
Cape	44,3%
"Other"	40,0%.

(b) The Transvaal had a superior pass rate than Natal or the Cape Province. A  $\chi^2$  was computed for the above distribution ("Not Indicated" excluded). A  $\chi^2$  value of 7,78 ( $p > 0,05$ ) was obtained. The differences in the pass-fail proportions among the provinces (including the "other" group) were not significant.

The above finding is similar to that of Erens (1977, 35) for first-year White students. He found no significant differences between first-year Pass group and Fail group on a provincial basis in South Africa.

#### 7.5.2. Home Province and Passing or Failing First Year : Degree Students

This distribution is shown in Table 7.3 (p. 218).

Table 7.3 shows that for degree students Transvaal led with 51,6%, followed by Natal (44,2%) and Cape Province (44,0%).

A  $\chi^2$  was computed for the distribution in Table 7.3 with the "Not Indicated" Group excluded. The value of  $\chi^2$  obtained was 11,63 ( $p < 0,01$ ). The performance by Transvaal students was significantly better than that of other groups as far as degree students were concerned.



TABLE 7.3

FIRST-YEAR PASS GROUPS AND FAIL GROUPS ACCORDING TO HOME PROVINCE : DEGREE STUDENTS

Province	Pass Group		Fail Group	
	No.	%	No.	%
Natal	1187	44,2	1498	55,8
Transvaal	309	51,6	290	48,4
Cape	81	44,0	103	56,0
Other	24	40,0	36	60,0
Not Indicated	4	14,3	24	85,7

#### 7.5.3. Rural or Urban Students and Passing or Failing First Year

In order to ascertain whether urban students differed in their first-year performance from rural students, a geographical categorisation of high school attended as "city" or "town" was used to obtain distributions of degree and diploma students. For the city category a population of 100 000 or more was required and for a town, a population under 100 000. The details appear in Table 7.4.

TABLE 7.4

CITY-TOWN DISTRIBUTION OF FIRST-YEAR PASS GROUP AND FAIL GROUP FOR DEGREE AND DIPLOMA STUDENTS

	Degree					Diploma			
	Pass Group		Fail Group			Pass Group		Fail Group	
	No.	%	No.	%		No.	%	No.	%
City	1216	45,8	1440	54,2	City	215	50,1	214	49,9
Town	361	44,5	451	55,5	Town	69	62,2	42	37,8

The following observations and inferences flow from Table 7.4:

- (a) (i) For degree students there was little difference between city and town students with 45,8% of the former and 44,5% of the latter passing.
- (ii) For diploma students there was an appreciable difference with 50,1% of urban students passing and 62,2% of rural students passing.
- (b)  $\chi^2$  was computed for each of the degree and diploma distributions to test these differences for significance.
- (i) The  $\chi^2$  for degree students was 0,44 ( $p > 0,05$ ). Passing or failing first-year degree examinations was not dependent on whether the high school attended was in a city or town.
- (ii) The  $\chi^2$  for diploma students was 5,13 ( $p < 0,05$ ). A significantly greater number of rural (town) students passed diplomas than urban (city) students. The finding for degree students was similar to that of Erens (1977, 36) who found no significant differences between the pass-fail proportions of first-year White students who attended city or town high schools.

#### 7.6. COMMUTER DISTANCE (BETWEEN UNIVERSITY AND STUDENTS' PLACES OF RESIDENCE) AND PASSING OR FAILING FIRST YEAR

Students' places of residence were categorised according to distance by road from the university. Hostel students stayed on the campus and were categorised as 0 km. The categories were:

- 0 km
- 1 - 10 km
- 11 - 20 km
- 21 - 35 km
- 35<sup>+</sup> km.

Table 7.5 shows the distribution of Pass Groups and Fail Groups for degree students and diploma students according to Commuter Distance. (A more detailed distribution including part-time and full-time as well as male and female dimensions are found in Appendix 11, p. 401).

TABLE 7.5

COMMUTER DISTANCE AND FIRST-YEAR PASS GROUPS AND FAIL GROUPS

Distance in km	Degree				Distance in km	Diploma			
	Pass Group		Fail Group			Pass Group		Fail Group	
	No.	%	No.	%		No.	%	No.	%
0	486	51,2	463	48,8	0	42	65,6	22	34,4
1 - 10	682	44,6	847	55,4	1 - 10	118	51,3	112	48,7
11 - 20	110	38,7	174	61,3	11 - 20	51	57,3	38	42,7
21 - 35	275	41,0	396	59,0	21 - 35	82	49,4	84	50,6
35 <sup>+</sup>	34	36,6	59	63,4	35 <sup>+</sup>	4	36,4	7	63,6
Not Indicated	8	40,0	12	60,0	Not Indicated	2	50,0	2	50,0

The following observations and inferences relate to Table 7.5:

Degree Students:

- (a) (i) The most successful students were those residing in hostels (51,2% passing).
- (ii) Then followed those living outside the university but within a ten kilometre radius.
- (ii) Those living furthest from the university, i.e., more than 35 kilometres away performed worst with 36,6% passing first year.
- (iv) Generally, the further a student lived from the university



the poorer his chances of passing first year.

Similar results were obtained by Erens (1977, 51) for White residential universities where hostel students performed better in the first year than students who travelled from home; and by the University of Natal for which "The Natal Mercury" of 1981-12-28, in an article "It pays to study in residence", reported that first-year residence students overshadowed their non-residence counterparts in the end of the year examinations. These results confirm the finding at the University of Durban-Westville that hostel-based students fare better than others in the first-year examinations.

- (b) A  $\chi^2$  was calculated for the distribution in Table 7.5. A value of 26,45 was obtained ( $p < 0,001$ ). There was, therefore, a significant relationship between distance travelled to university and first-year performance. Students staying on campus or close to the university performed significantly better than students living further away. This finding confirms that of Gounden (1977, 142) who found that at the University of Durban-Westville commuter distance correlated significantly with first-year performance for degree students in the Faculty of Education - those travelling greater distances fared worse than those living at or near the university.

#### Diploma Students

Students' performances declined as commuter distance increased.

A  $\chi^2$  was computed for the distribution of the diploma students and a value of 6,41 ( $p > 0,05$ ) was obtained. Commuter distance, therefore, was a factor but not a significant one in the performance of the diploma students.

### 7.7. HOME LANGUAGE AND PASSING OR FAILING IN THE FIRST YEAR

The following languages were given by students as those spoken at home: Afrikaans, Afrikaans and English, English, Gujerati, Hindi, Memon, Tamil, Telegu and Urdu.

Table 7.6 shows the distribution of the Pass Group and Fail Group for degree students according to Home Language. (A more detailed distribution including male-female, full-time-part-time, and degree-diploma dimensions appears in Appendix 12, p. 403).

TABLE 7.6

HOME LANGUAGE AND FIRST-YEAR PASS GROUP AND FAIL GROUP : DEGREE

Home Language	Pass Group		Fail Group	
	No.	%	No.	%
Afrikaans	9	52,9	8	47,1
Afrikaans and English	41	50,0	41	50,0
English	768	42,8	1027	57,2
Gujerati	338	56,2	263	43,8
Hindi	137	46,5	160	53,9
Memon	49	53,3	43	46,7
Tamil	109	40,4	161	59,6
Telegu	26	29,5	62	70,5
Urdu	50	39,1	78	60,9
Not Indicated	78	41,9	108	58,1

From Table 7.6 the following observations and inferences are made:

(a) Language groups with pass rates in excess of 50% were:

Gujerati	56,2%
Memon	53,3%
Afrikaans	52,9%
Afrikaans and English	50,0% .

(b) Three language groups had pass rates between 40% and 50%:

Hindi	46,1%
English	42,8%
Tamil	40,4% .

(c) Below 40% were:

Urdu	39,1%
Telegu	29,5% .

A  $\chi^2$  was computed for degree students for the languages spoken at home and passing or failing first year. A  $\chi^2$  value of 50,60 ( $p < 0,001$ ) was obtained. Significant differences existed in the pass-fail proportions of the various language groups with Gujerati, Memon, Afrikaans, English and Afrikaans, being far more successful than others, especially English, Tamil, Urdu and Telegu. Erens (1977, 23) in his study of first-year students at White universities, found that Afrikaans-speaking students performed better than English-speaking but the difference was not significant.

Pass-Fail distributions for diplomas (Appendix 12, p. 403) were subjected to a  $\chi^2$  test. The  $\chi^2$  value obtained was 1,81 ( $p > 0,05$ ). The pass-fail proportions among diploma students were not influenced significantly by home language.

#### 7.8. AGE (CHRONOLOGICAL) AND PASSING OR FAILING FIRST YEAR

The student's age is that given at first registration.



Table 7.7 shows the age distributions for the Pass Group and the Fail Group for degree and diploma students. (Appendix 13, p. 405. contains a more detailed distribution including full-time, part-time, male and female data).

TABLE 7.7

DISTRIBUTION OF AGES FOR FIRST-YEAR PASS GROUPS AND FAIL GROUPS : DEGREE AND DIPLOMA

Age in Years	Degree				Diploma			
	Pass Group		Fail Group		Pass Group		Fail Group	
	No.	%	No.	%	No.	%	No.	%
≤ 17	134	43,9	171	56,1	8	40,0	10	60,0
18	590	49,0	614	51,0	86	51,5	81	48,5
19	423	46,9	478	53,1	87	52,1	80	47,9
20	186	40,0	244	60,0	71	57,3	53	42,7
21	84	40,0	112	60,0	29	59,2	20	40,8
22 - 25	124	40,1	185	59,9	12	41,4	17	58,6
26 - 30	35	30,0	77	70,0	0	0	0	0
31 <sup>+</sup>	29	29,3	70	70,7	6	60,0	4	40,0

From Table 7.7 the following observations and inferences are made:

Degrees:

(a) The most successful age groups were:

- (i) 18-year olds - 49% passing,
- (ii) 19-year olds - 46,9%,
- (iii) 17 and under - 43,9%.

(b) Students in the age ranges 20; 21; 22 - 25, had 40% pass rates.

- (c) The 26-30 year group had a pass rate of 30% while those who were 31 years and older had 29,3%.
- (d) It is clear that for degree students, the younger student (under 20 on registration) had a better chance of passing first year than the older (20 and over), especially those over 25.
- (e) A  $\chi^2$  was computed for the degree distribution and a value of 31,55 ( $p < 0,001$ ) was obtained. Younger students had significantly better pass rates than older students.

#### Diplomas:

- (a) For diplomas the students in the age categories  $\leq 17$  and  $22^+$  were few. In the age categories ranging from 18 to 21 an increase in age was accompanied by an increase in the percentage passing first year.
- (b) A  $\chi^2$  was computed for the diploma distribution and a value of 3,12 ( $p > 0,05$ ) was obtained. The differences were not significant. Age therefore was not a significant factor in passing or failing first year as far as diploma students are concerned.

#### Sex of Student in each Age Group

For each age group a  $\chi^2$  was computed to test sex differences between passing students and failing students for degrees and diplomas. Very small  $\chi^2$  values were obtained with none significant for degrees or diplomas. Therefore while the age category was a significant factor in passing or failing for degree students, the sex of the student in an age category was not important for either degree or diploma.

#### 7.9. MATRICULATION STATUS AND PASSING OR FAILING FIRST YEAR

Students indicated their matriculation status as follows:

- (i) Senior Certificate with Matriculation exemption,

- (ii) Senior Certificate with Conditional or Mature Age exemption,  
 (iii) Senior Certificate without Matriculation exemption.  
 (Appendix 14, p. 407 contains detailed distributions of the Pass Group and the Fail Group in respect of matriculation status).

#### 7.9.1. Matriculation Status and Passing or Failing First-Year

Students were grouped into 2 categories as follows:

- (a) Students with matriculation exemptions.  
 (b) Other students: this group comprised those with conditional or mature age exemptions and senior certificates without exemptions.

Table 7.8 shows the distributions of matriculation status of the first-year Pass Group and Fail Group for degrees and diplomas.

TABLE 7.8

MATRICULATION STATUS AND PASSING OR FAILING FIRST YEAR : DEGREE AND DIPLOMA

Matriculation Status	Degree				Matriculation Status	Diploma			
	Pass Group		Fail Group			Pass Group		Fail Group	
	No.	%	No.	%		No.	%	No.	%
Matriculation Exemption	1456	49,6	1477	50,4	Matriculation Exemption	65	55,1	53	44,9
Others	143	35,9	255	64,1	Others	224	59,6	152	40,4

The following observations and inferences are made from Table 7.8:

#### (a) Degree

- (i) In the first year, degree students with matriculation exemption performed better than those without it with 49,6% of the



former and 35,9% of the latter, passing.

- (ii)  $\chi^2$  was computed for the degree distribution and a value of 26,40 ( $p < 0,001$ ) was obtained. There was a significant difference between the performance of students with matriculation exemption compared with those without. The former had significantly better pass rates.

(b) Diploma

- (i) Amongst the diploma students, those with exemptions were less successful (55,1% passing) than those without exemptions (59,6%).
- (ii) A  $\chi^2$  was calculated for the diploma distribution and a value of 0,75 ( $p > 0,05$ ) was obtained. Therefore, these differences were not significant.

7.9.2. Matriculation Status, Full-time, Part-time, and Passing or Failing First Year

An analysis was made of the performance of full-time and part-time students with, and without, matriculation exemptions. The distributions for this appears in Table 7.9.

TABLE 7.9

PART-TIME AND FULL-TIME STUDENTS WITH OR WITHOUT MATRICULATION EXEMPTION IN THE FIRST-YEAR PASS GROUP AND FAIL GROUP

Students with Matriculation Exemption				Students without Matriculation Exemption					
Full-Time or Part-Time	Pass Group		Fail Group		Full-Time or Part-Time	Pass Group		Fail Group	
	No.	%	No.	%		No.	%	No.	%
Full-Time	1416	50,0	1415	50,0	Full-Time	94	47,0	106	53,0
Part-Time	40	39,2	62	60,8	Part-Time	49	31,6	106	68,4

(Note: There were no part-time diploma students).

The following deductions arise from Table 7.9:

- (a) Full-time students with matriculation exemption were more successful than part-time students with matriculation exemption. The same applied to students without matriculation exemption.
- (b) A  $\chi^2$  was computed for those with matriculation exemption and a value of 4,60 ( $p < 0,05$ ) was obtained. Of the students with matriculation exemption, full-time students were significantly more successful than part-time.
- (c) A  $\chi^2$  for those without matriculation exemption was 8,59 ( $p < 0,01$ ). Among students without matriculation exemption, full-time students performed significantly better than part-time.

#### 7.10. MATRICULATION AGGREGATE AND PASSING OR FAILING FIRST YEAR

Matriculation aggregates are given in symbols:

A	:	80% - 100%
B	:	70 - 79%
C	:	60% - 69%
D	:	50% - 59%
E <sup>+</sup>	:	45% - 49%
E	:	40% - 44%
F	:	33 - 39%.

(The full distribution of matriculation aggregates appears in Appendix 15, p. 409, for the Pass Group and the Fail Group. Details in respect of degree-diploma, male-female and full-time-part-time are also included).

### 7.10.1. Matriculation aggregate and Passing or Failing First Year

In Table 7.10 the student numbers for the Pass groups and the Fail groups for each aggregate are indicated for degree and diploma students.

TABLE 7.10

#### MATRICULATION AGGREGATE AND PASSING OR FAILING FIRST YEAR

Aggregate	Degree				Diploma			
	Pass Group		Fail Group		Pass Group		Fail Group	
	No.	%	No.	%	No.	%	No.	%
A	1	100	0	0	-	-	-	-
B	4	66,7	2	33,3	-	-	-	-
C	135	68,2	63	31,8	-	-	-	-
D	639	51,6	599	48,4	33	56,9	25	43,1
E <sup>+</sup>	414	42,1	570	57,9	71	56,8	54	43,2
E	12	50,0	12	50,0	169	64,3	94	35,7
F	2	50,0	2	50,0	3	11,5	23	88,5
Not Indicated	398	36,1	703	63,9	23	25,0	69	75,0

The following observations and inferences relate to Table 7.10:

(a) Degree Students

- (i) Among the degree students the numbers with A, B, E and F aggregates are very small, and meaningful inferences cannot be drawn from these alone.
- (ii) However, the pass rates indicated clearly that better aggregates produced better pass rates:
  - 42,1% for E<sup>+</sup> aggregates
  - 51,6% for D aggregates
  - 68,2% for C aggregates.



- (iii) The finding in (ii) above is supported by findings in some overseas countries and in South Africa. In the United States of America for example, high school achievement is the best predictor of performance at university (Astin, 1976, 30). Past performance is the best predictor of future performance. High school results are also indices of important social variables and thus it is not surprising that high school results are the best available predictors of success at university. Erens' study (1977, 42) of performance of White South African, first-year students produced results confirming that performance at university is related to that at school. Gounden (1977, 103) found a positive, though not significant, correlation between high school achievement and first-year results of degree students in the Education Faculty at the University of Durban-Westville. One researcher (Penny, 1979, 91) however, found evidence to the contrary with low correlation between matriculation performance and academic success for Black students at the University of Fort Hare.
- (iv) A  $\chi^2$  test was applied to the distribution of matriculation aggregates for the Pass Group and Fail Group for degrees in Table 7.10. The  $\chi^2$  value obtained was 52,72 ( $p < 0,001$ ). Degree students with better aggregates were significantly more successful in the first year than students with poorer aggregates.
- (v) Because the great majority of the degree students had aggregates in the range  $E^+$ , D and C,  $\chi^2$  tests were applied to the differences in the pass-fail proportions between  $E^+$  and D aggregates and between D and C aggregates.

For E<sup>+</sup> and D aggregates, a  $\chi^2$  of 20,2 was obtained ( $p < 0,001$ ).

Degree students with D aggregates were significantly more successful than degree students with E<sup>+</sup> aggregates.

For D and C aggregates a  $\chi^2$  of 18,85 ( $p < 0,001$ ) was obtained. Degree students with C aggregates were significantly more successful than students with D aggregates.

(b) Diploma Students

(i) No distinct relationship emerged between matriculation aggregate and first year performance as far as diploma students were concerned.

(ii)  $\chi^2$  computations were made for diploma students and all values were not significant. Success in first-year diploma examinations was not dependent on the matriculation aggregate of the student.

7.10.2. Matriculation Aggregate, Sex of Student and Passing or Failing First Year

An analysis was made to discover whether the sex of the student had any bearing on the matriculation aggregates and first-year examination results. For each of the aggregates a  $\chi^2$  was calculated to see if significant differences existed between the achievement of males and females.

(i) For degree students all  $\chi^2$  values were very small and not significant ( $p > 0,05$ ). Regarding passing or failing first year, therefore, there was no significant difference between male and female students with the same matriculation aggregates.

(ii) For diploma students no  $\chi^2$  values were significant ( $p > 0,05$ ). Again, the sex of the student was not a factor when students with

the same matriculation aggregate were compared for performance in first-year diploma examinations.

### 7.10.3. Matriculation Aggregates and Passing or Failing First Year on a Faculty Basis

Matriculation aggregates and first-year academic achievement were analysed on a Faculty basis. Table 7.11 (p. 233) shows the distribution of Passing and Failing degree students for each of the aggregates E<sup>+</sup>, D and C in the five Faculties. (A and B aggregates with 1 and 6 students respectively were omitted from the analysis).

Observations and deductions that emerge from Table 7.11 are listed below:

- (a) Generally, for E<sup>+</sup> and D aggregates, in each Faculty, D aggregates produced a higher percentage of passes than E<sup>+</sup> aggregates.
- (b) For D and C aggregates
  - (i) there appeared to be little difference between those passing and those failing in the Faculties of Arts and Law.
  - (ii) in the Faculties of Commerce, Education and Science, C aggregates were associated with better pass rates when compared with D aggregates.
- (c) (i)  $\chi^2$  was computed for each aggregate to ascertain whether significant differences existed between the Passing and Failing groups among degree students in the five Faculties. For the E<sup>+</sup> aggregate, a  $\chi^2$  value of 108,30 ( $p < 0,001$ ) was obtained. Passing or failing first year with an E<sup>+</sup> matriculation aggregate was dependent on the Faculty. The Commerce Faculty with 63,5% passes, had a significantly better pass rate than the other Faculties, in particular Science, where only 19,6% passed.



TABLE 7.11

MATRICULATION AGGREGATE AND PASSING OR FAILING FIRST YEAR ACCORDING TO FACULTY, FOR DEGREE STUDENTS

Faculty	Matriculation Aggregate											
	E <sup>+</sup>				D				C			
	Pass Group		Fail Group		Pass Group		Fail Group		Pass Group		Fail Group	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Arts	117	40,1	175	59,9	145	51,3	128	46,9	13	52,0	12	48,0
Commerce	191	63,5	110	36,5	200	73,0	74	27,0	17	81,0	4	19,0
Education	32	38,1	52	61,9	70	55,6	56	44,4	6	60,0	4	40,0
Law	26	41,9	36	58,1	29	60,4	19	39,6	3	60,0	2	40,0
Science	48	19,6	197	80,4	195	37,6	324	62,4	96	70,1	41	29,9

- (ii) In view of the fact that the Faculty of Commerce required a student to pass two first-year subjects to gain promotion to second year as against three or more by the other Faculties, another  $\chi^2$  was computed omitting the Faculty of Commerce. The  $\chi^2$  value obtained for Arts, Education, Science and Law was 29,87 ( $p < 0,001$ ). Even with Commerce excluded, there were significant differences in the remaining Faculties. Arts (40,1%), Education (38,1%) and Law (41,9%) had significantly superior pass rates than Science (19,6%).
- (d) (i) The  $\chi^2$  value for D aggregates for the five Faculties was 93,63 ( $p < 0,001$ ). Commerce students performed significantly better than students in the Law, Arts and Education Faculties.
- (ii) When the Faculty of Commerce was omitted from the calculation,  $\chi^2$  for the remaining Faculties was 28,99 ( $p < 0,001$ ). This was evidence that there existed significant differences between the low pass rate of 37,6% for Science and those of the other Faculties which ranged from 53,1% to 73,0%.
- (e) For the C aggregate the value of  $\chi^2$  was 5,29 ( $p > 0,05$ ). For students with C aggregates, passing or failing first year was not dependent on the Faculty in which the student had enrolled.

#### 7.11. MATRICULATION SUBJECTS AND SYMBOLS AND PASSING OR FAILING FIRST YEAR

A count was made of the subjects taken for matriculation by all those students who indicated them on the registration forms. Of the 4120 students, 2621 (63,6%) indicated subjects taken for matriculation. (The principal subjects taken by students appear in Chapter 5, p. 164).

##### 7.11.1. Subject Predictors for Passing or Failing First Year at the University of Durban-Westville

Table 7.12 (p. 235) shows the distribution of symbols of matriculation

TABLE 7.12

PERCENTAGE DISTRIBUTION OF SYMBOLS OF MATRICULATION SUBJECTS TAKEN BY THE PASS GROUP AND THE FAIL GROUP

Subjects (Matriculation)	Pass Group									Fail Group								
	Symbols									Symbols								
	A	B	C	D	E	F	Total		A	B	C	D	E	F	Total			
	%	%	%	%	%	%	No.	%	%	%	%	%	%	%	No.	%		
English	0,2	0,4	6,9	35,2	57,0	0,4	1330	100	0,2	0,9	5,9	33,5	58,9	0,6	1291	100		
Mathematics	3,1	6,5	19,0	30,7	32,0	8,8	1142	100	3,0	4,9	17,6	31,7	36,3	6,5	1063	100		
Biology	0,0	1,3	12,5	35,4	42,3	8,4	974	100	0,0	0,4	8,9	33,7	50,4	6,4	892	100		
Afrikaans	0,1	0,5	4,1	22,3	62,6	10,4	938	100	0,1	0,9	4,2	18,2	61,8	14,8	922	100		
Geography	0,5	3,5	11,1	29,7	43,0	12,1	916	100	0,1	1,1	6,6	28,8	47,9	15,4	799	100		
Accountancy	5,4	13,4	33,4	32,3	13,8	1,7	629	100	3,3	10,3	23,5	36,8	23,0	3,1	514	100		
History	3,4	10,3	27,8	32,8	23,0	2,7	522	100	2,9	6,6	25,9	32,5	29,8	2,3	560	100		
Physical Science	2,3	6,0	23,6	36,5	27,3	4,4	433	100	0,5	1,6	19,0	36,7	37,6	4,6	436	100		



subjects according to the Pass Group and the Fail Group.

For each matriculation subject in Table 7.12 the distribution of matriculation symbols for the Pass Group and Fail Group was tested by  $\chi^2$  for independence. The following table shows the results for all first-year students.

TABLE 7.13

$\chi^2$  FOR DISTRIBUTION OF SYMBOLS FOR PASS GROUP AND FAIL GROUP IN EACH MATRICULATION SUBJECT

English	Mathematics	Biology	Afrikaans	Geography	Accountancy	History	Physical Science
$\chi^2 = 4,80$	$\chi^2 = 11,13$	$\chi^2 = 18,36$	$\chi^2 = 11,36$	$\chi^2 = 27,43$	$\chi^2 = 31,47$	$\chi^2 = 10,05$	$\chi^2 = 25,76$
$p > 0,05$	$p < 0,05$	$p < 0,01$	$p < 0,05$	$p < 0,001$	$p < 0,001$	$p > 0,05$	$p < 0,001$

The following observations and inferences relate to Table 7.13:

- (a) English: There was no significant difference ( $p > 0,05$ ) in the distribution of matriculation symbols in English between the Pass group and the Fail group. This finding at the university of Durban-Westville is supported by Erens (1977, 44) who, in his study of first-year White students found no significant differences between the distribution of Matriculation English symbols of the Pass Group and the Fail Group.
- (b) Mathematics: There was a significant difference ( $p < 0,05$ ) between the distribution of matriculation symbols in Mathematics for the Pass group and Fail group. The Pass group had a significantly better

distribution of Matriculation Mathematics symbols than the Fail group. Supportive evidence for this finding comes from Erens (1977, 45) who in his study of White first-year university students, found that the Pass group had Mathematics symbols superior to the Fail group although the difference was not significant.

- (c) Biology: The difference between the distributions of matriculation Biology symbols of the Pass group and Fail group was significant ( $p < 0,01$ ). The Pass group had a much better distribution of symbols than the Fail group.
- (d) Afrikaans: The difference between the distribution of Afrikaans matriculation symbols of the Pass group and Fail group was significant ( $p < 0,05$ ). The Pass group had a superior distribution. Erens (1977, 43), in his study of White first-year students in South Africa found that while the Pass group had a better distribution of symbols in Matriculation Afrikaans, the difference was not significant.
- (e) Geography: There was a highly significant difference ( $p < 0,001$ ) between the distributions of Matriculation Geography symbols of the Pass group and Fail group. The Pass group had a far better distribution.
- (f) Accountancy: A highly significant difference ( $p < 0,001$ ) existed between the distributions of Matriculation Accountancy symbols of the Pass group and the Fail group. The Pass group had a much better distribution.
- (g) History: There was no significant difference between the distributions of the Matriculation History symbols for the Pass group and Fail group.
- (h) Physical Science: There was a highly significant difference ( $p < 0,001$ ) between the distributions of Matriculation Physical Science symbols of the Pass group and Fail group. The Pass group had a significantly better distribution of symbols than the Fail group.

One can conclude, therefore, that highly significant predictors ( $p < 0,001$ ) of first-year success at university were matriculation symbols in Physical Science, Geography and Accountancy. Significant predictors were Biology, ( $p < 0,01$ ), Mathematics ( $p < 0,05$ ) and Afrikaans ( $p < 0,05$ ). English and History were not significant predictors for first-year success at the University of Durban-Westville ( $p > 0,05$ ).

The above results have a bias in favour of the Pass group resulting from the fact that Commerce students required passes in at least 2 first-year subjects to enter the second year of study while other Faculties required passes in 3 or more. In order to study the situation with this anomaly removed, a fresh set of  $\chi^2$  values was calculated for the university with the Commerce Faculty excluded.

#### 7.11.2. Subject Predictors for Passing or Failing First Year at the University of Durban-Westville with the Commerce Faculty excluded

The new calculations were for all students - degree and diploma. These are included in Table 7.14. (p. 239).

With the exclusion of the Commerce Faculty some of the relationships, as illustrated by Table 7.14, changed:

- (a) History and English, which were not significant when Commerce was included, became significant at the 5% level ( $p < 0,05$ ).
- (b) Mathematics and Afrikaans retained their significance at the 5% level ( $p < 0,05$ ).
- (c) Physical Science and Geography retained their high significance at the 0,1% level ( $p < 0,001$ ).
- (d) Biology increased in significance from the 1% level ( $p < 0,01$ ) to the 0,1% level ( $p < 0,001$ ).



TABLE 7.14

$\chi^2$  FOR DISTRIBUTION OF SYMBOLS FOR PASS GROUP AND FAIL GROUP IN EACH MATRICULATION SUBJECT, WITH THE COMMERCE FACULTY (a) EXCLUDED (b) INCLUDED

	Matriculation Subjects							
	English	Mathematics	Physical Science	Biology	Afrikaans	History	Geography	Accountancy
(a) $\chi^2$ (Commerce excluded)	8,90 p < 0,05	13,59 p < 0,05	38,49 p < 0,01	23,41 p < 0,001	10,69 p < 0,05	12,58 p < 0,05	29,69 p < 0,001	16,34 p < 0,01
(b) $\chi^2$ (Commerce included)	4,80 p > 0,05	11,13 p < 0,05	25,76 p < 0,001	18,36 p < 0,01	11,36 p < 0,05	10,05 p > 0,05	27,43 p < 0,001	31,47 p < 0,001

- (e) Accountancy decreased in significance from 0,1% level ( $p < 0,001$ ) to 1% ( $p < 0,01$ ). Accountancy was a better predictor for the Commerce Faculty than for others,
- (f) A revised assessment of predictors for the University of Durban-Westville, with the Commerce Faculty excluded, is as follows:
  - (i) Subjects with very high predictive values, i.e.,  $p < 0,001$ , were Physical Science, Biology and Geography.
  - (ii) The subject with a high predictive value, i.e.,  $p < 0,01$ , was Accountancy.
  - (iii) Subjects with moderately high predictive values, i.e.,  $p < 0,05$ , were English, Mathematics, Afrikaans and History.

The analysis above identified predictors for the University as a whole. In the next section predictors are sought for degrees and diplomas separately.

### 7.11.3 Subject Predictors for Passing or Failing in First Year (a) Degrees and (b) Diplomas

(Appendix 16, p. 411 shows the distribution of matriculation symbols for each subject for the Pass Group and the Fail Group).  $\chi^2$  tests were applied to the Pass-Fail distributions for each subject. The results are shown in Table 7.15 (p. 241).

The following conclusions are drawn from Table 7.15:

- (a) Degree:
  - (i) Subjects in which there were highly significant differences ( $p < 0,001$ ) between the distribution of matriculation symbols for the Pass Groups and the Fail Groups were: Physical Science, Geography and Accountancy. In all these subjects the Pass Group had significantly better distributions.

TABLE 7.15

DISTRIBUTION OF SYMBOLS OF MATRICULATION SUBJECTS ACCORDING TO PASS GROUP AND FAIL GROUP

	Matriculation Subjects							
	English	Mathematics	Physical Science	Biology	Afrikaans	History	Geography	Accountancy
(a) $\chi^2$ : Degree	4,72 $p > 0,05$	16,81 $p < 0,01$	29,40 $p < 0,001$	28,49 $p < 0,001$	14,08 $p < 0,01$	16,07 $p < 0,01$	28,35 $p < 0,001$	45,36 $p < 0,001$
(b) $\chi^2$ : Diploma	2,41 $p > 0,05$	2,67 $p > 0,05$	0,98 $p > 0,05$	2,23 $p > 0,05$	2,64 $p > 0,05$	1,25 $p > 0,05$	5,70 $p > 0,05$	0,47 $p > 0,05$



- (ii) Subjects in which moderately high significance ( $p < 0,01$ ) existed between the distributions of matriculation symbols for the Pass group and Fail group were: Mathematics, Afrikaans and History.
- (iii) English was the only subject which was not significant.

(b) Diploma:

There was no significant difference between the distributions of symbols for matriculation subjects for the first-year Pass group and Fail group among diploma students.

In the next section, subject predictors are sought on a Faculty basis.

7.11.4. Subject Predictors for Passing or Failing First Year at the University of Durban-Westville According to Faculty

An analysis was made of the distribution of symbols in each matriculation subject among passing students and failing students of the first year. This was done for each Faculty (The details appear in Appendix 17, p. 413).  $\chi^2$  was computed for each subject according to Faculty to see if Passing or Failing was dependent on the distribution of symbols in the matriculation examination. The results are given in Table 7.16 (p. 243).

The probability (p) values in Table 7.16 indicate the extent to which passing or failing first year at university is dependent on the quality of the symbol of the subject taken for the matriculation examination. Subjects which show significant differences between Pass and Fail groups at  $p < 0,001$  are regarded as having very high predictive values and those that are significant at  $p < 0,05$  as having moderate predictive values. The results tabulated in Table 7.16 have been synthesised into another Table, i.e., Table 7.17 (p. 244).

TABLE 7.16

$\chi^2$  FOR DISTRIBUTION OF SYMBOLS OF MATRICULATION SUBJECTS TAKEN BY FIRST-YEAR PASSING STUDENTS AND FAILING STUDENTS, ACCORDING TO FACULTY

Matriculation Subjects	Faculty											
	Arts		Commerce		Education		Law		Science		Total	
	$\chi^2$	p	$\chi^2$	p	$\chi^2$	p	$\chi^2$	p	$\chi^2$	p	$\chi^2$	p
English	10,05	< 0,05	0,07	-	4,01	-	3,85	10,05	4,08	-	4,80	-
Mathematics	3,01	-	10,61	< 0,05	8,69	-	12,62	< 0,001	52,75	< 0,001	11,13	< 0,05
Biology	5,66	-	7,01	-	4,04	-	0,01	-	46,07	< 0,001	18,36	< 0,01
Afrikaans	19,15	< 0,001	8,29	< 0,05	1,71	-	9,81	< 0,01	3,28	-	11,36	< 0,05
Geography	6,08	-	7,14	-	2,02	-	0,37	-	54,82	< 0,001	27,43	< 0,001
Accountancy	2,16	-	10,31	< 0,05	3,64	-	1,26	-	21,58	0,001	31,47	< 0,001
History	10,16	< 0,05	0,59	-	2,36	-	0,01	-	16,3	< 0,001	10,05	-
Physical Science	1,94	-	3,42	-	0,05	-	1,11	-	54,22	< 0,001	25,76	< 0,001

NOTE: p is given only for significant  $\chi^2$ .

TABLE 7.17

PREDICTIVE CAPACITY FOR SUCCESS OF MATRICULATION SUBJECTS FOR EACH FACULTY AT THE UNIVERSITY OF DURBAN-WESTVILLE

Matriculation Subjects	Faculties for which subjects have			
	Very High Predictive Value ( $p < 0,001$ )	High Predictive Value ( $p < 0,01$ )	Moderate Predictive Value ( $p < 0,05$ )	No Predictive Value ( $p > 0,01$ )
English	-	-	Arts, Law	Commerce, Education, Science
Mathematics	Science, Law	-	Commerce	Arts, Education
Biology	Science	-	-	Arts, Commerce, Education, Law
Afrikaans	Arts	Law	Commerce	Education, Science
Geography	Science	-	-	Arts, Commerce, Education, Law
Accountancy	Science	-	Commerce	Arts, Education, Law
History	Science	-	Arts	Commerce, Education, Law
Physical Science	Science	-	-	Arts, Commerce, Education, Law



Table 7.17 (p. 244) shows the predictive capacity of each matriculation subject for passing or failing first year in each Faculty.

The predictors on a Faculty basis are:

- (i) Science Predictors: Language subjects (English and Afrikaans) excluded, all remaining 6 subjects had very high predictive values for success or failure in the Science Faculty.
- (ii) Law Predictors: Law had one very high-valued predictor in Mathematics, one high-valued predictor in Afrikaans, and one moderate predictor in English.
- (iii) Arts Predictors: The Arts Faculty had one very high predictor in Afrikaans and two moderate predictors in English and History.
- (iv) Commerce Predictors: Commerce had three moderate predictors: Mathematics, Afrikaans and Accounting.
- (v) Education Predictors: Education had no subject predictors of significance.

The high predictive value of History for success in the Science Faculty may surprise some. However, the History symbol is also an index of the effort a student puts into his studies. Sustained effort is an important requisite for university success (Penny, 1979, 31). The importance of high quality symbols in Science and Mathematics in the matriculation examination has been emphasised by the Committee of University Principals who stated that, while Physical Science, Mathematics and Biology were important high school subjects for prospective university students, White South African matriculants had insufficient knowledge of these subjects (Louw, 1980, 14).

7.12. NUMBER OF FIRST-YEAR COURSES ENROLLED FOR, AND PASSING OR FAILING IN THE FIRST YEAR

The relationship between the number of courses taken by first-year students and their success at the end of the first year, was analysed next. Table 7.18 shows the number of subjects taken by the students in their first year and the corresponding pass rates and failure rates.

TABLE 7.18

NUMBER OF COURSES TAKEN BY FIRST-YEAR STUDENTS AND THE NUMBER PASSING OR FAILING FIRST YEAR

Number of Courses Taken	Total	Number Passing First Year		Number Failing First Year	
		No.	%	No.	%
3 courses	445	139	31,2	306	68,8
4 courses	1336	622	46,6	714	53,4
5 courses	1310	921	70,3	389	29,7
6 courses	322	221	68,6	101	31,4

The following observations and inferences relate to Table 7.18:

- (a) The percentage passes were as follows for the respective number of courses taken:
- (i) five courses 70,3%
  - (ii) six courses 68,6%
  - (iii) four courses 46,6%
  - (iv) three courses 31,2%
- (b) The above statistics demonstrate clearly that students who took more first-year courses were more successful than those taking fewer.

It must be remembered however, that the brighter students take more courses and the weaker ones fewer. Full-time students enrol for more courses than part-time students who are also restricted by enrolment regulations.

- (c)  $\chi^2$  was computed to test whether passing or failing was dependent on the number of courses taken in the first year. A  $\chi^2$  value of 283,85 ( $p < 0,001$ ) was obtained. Highly significant relationships existed between the number of courses taken in the first year and the passing or failing in the first-year examinations. Those taking 5 or 6 subjects had a significantly better chance of passing first year than those taking 3 or 4 courses.

#### 7.13. TAKING AT UNIVERSITY LEVEL, SUBJECTS WHICH WERE TAKEN AT HIGH SCHOOL AND PASSING OR FAILING FIRST YEAR

A study was made of the results of first-year students in University subjects which were also in the matriculation curriculum. The purpose of such a study was to establish whether success at university was greater in subjects taken at high school than in subjects not taken or offered at high school.

English, Mathematics, Biology, Afrikaans, Geography, Accountancy, History and Physical Science were the most popular subjects taken by matriculating pupils at Indian high schools.

However, because English and Afrikaans were compulsory matriculation subjects and hence taken by all, they were omitted from this study. Also excluded were Biology and Mathematics which are also taken by almost all Indian matriculants. The school subjects chosen were Geography, History, Accountancy and Physical Science. The relationships studied were those of:



TABLE 7.19

FIRST-YEAR RESULTS IN UNIVERSITY SUBJECTS OFFERED AT HIGH SCHOOL

University Subjects	Subjects taken at Matriculation level	Passed Course I at University		Failed Course I at University		$\chi^2$	p
		No.	%	No.	%		
Geography	Yes	37	49,3	38	50,7	0,00	> 0,05
	No	2	50,0	2	50,0		
History	Yes	73	67,0	36	33,0	4,12	< 0,05
	No	3	33,0	6	66,7		
Accounting	Yes (Accountancy)	227	59,7	153	40,3	38,34	< 0,001
	No	34	27,6	89	72,4		
Physics (IB)	Yes (Physical Science)	299	64,3	166	35,7	4,48	< 0,05
	No	101	58,4	72	41,6		
Chemistry	Yes (Physical Science)	252	55,9	199	44,1	21,79	< 0,001
	No	82	36,8	141	63,2		

High School Geography with Geography I;  
 High School History with History I;  
 Accountancy with Accounting I;  
 Physical Science with Physics IB and Chemistry I.

Table 7.19 (p. 248) shows the pass and fail data in the university subjects mentioned above, and also whether or not corresponding school subjects were taken. A  $\chi^2$  was computed for each pairing.

Table 7.19 indicates the following:

- (a) Highly significant  $\chi^2$  values were obtained for Accountancy I ( $\chi^2 = 38,34$ ;  $p < 0,001$ ) and Chemistry I ( $\chi^2 = 21,79$ ;  $p < 0,001$ ). Students who took Accountancy and Physical Science at high school were far more successful in Accounting I and Chemistry I respectively, than students who had not taken these subjects at school.
- (b) Significant values for  $\chi^2$  were obtained for History ( $\chi^2 = 4,12$ ;  $p < 0,05$ ) and Physics IB ( $\chi^2 = 24,48$ ;  $p < 0,05$ ). Students who took History and Physical Science for the matriculation examinations fared significantly better at university in History I and Physics IB respectively than students who had not taken these subjects at school.
- (c) Performance in Geography I was independent of whether or not the student took the subject at high school.

#### 7.14. THE SEMESTER SYSTEM AND PASSING OR FAILING FIRST YEAR

##### 7.14.1. The Semester System in the Commerce Faculty

A study was made of the effect of the Semester system of courses and examinations in the Faculty of Commerce on passing or failing first year. The pass-fail data for the 1971-1975 non-semester years, compared with the data for the semester year 1976, are shown in Table 7.20 (p. 250).

TABLE 7.20

FIRST-YEAR RESULTS IN THE FACULTY OF COMMERCE : 1971-1975 (NON-SEMESTER)  
AND 1976 (SEMESTER)

Year	Pass Group		Fail Group	
	No.	%	No.	%
1971-1975 (Non-Semester)	531	69,1	238	30,9
1976 (Semester)	121	46,5	139	53,5

The following observations and inferences relate to Table 7.20:

- (a) There was a conspicuous decline in the percentage pass from 69,1% for the period 1971-1975 to 46,5% in 1976.
- (b) A  $\chi^2$  was computed for the above distribution and the  $\chi^2$  value of 42,42 is highly significant ( $p < 0,001$ ). Significantly fewer students passed first year in the semester examinations of 1976 than in the non-semester examinations of 1971-1975.

#### 7.14.2. An Analysis of Semester Examination Results of 1976 for the entire university

The following departments operated on the Semester system as from 1976:

Faculty of Commerce: Industrial Psychology; Public Administration; Economics; Business Economics; Accounting and Statistics (the entire Faculty of Commerce).

Faculty of Arts: Political Science; Criminology and Philosophy.

Faculty of Science: Botany, Zoology and Computer Science.

Altogether these comprised 12 departments from a total of more than 50 in



1976.

Variations are found in the way different departments operated the semester system. The departments of Accounting, Industrial Psychology, Statistics and Computer Science worked on a fixed sequence system in which students were eligible for the second semester courses, only if they had passed the first semester. Public Administration, Zoology and Botany operated on a couplet system in which students scoring between 40 and 50% in the first semester were permitted to enter the second semester where they had to perform sufficiently well to average a pass ( $\geq 50\%$ ) over both semesters. Economics, Business Economics, Philosophy, Criminology and Political Science operated a system where semesters were independent, i.e., one could take the second semester, irrespective of the result of the first.

Table 7.21 (p. 252) shows the distribution of passes and failures of first-year students of 1976 in the 12 departments that operated on the semester system. For the purpose of this study a pass in the first year means a pass in both semesters.

The following observations and inferences relate to Table 7.21:

- (a) Table 7.21 (A) shows a wide range of pass rates over the various departments offering semester courses. Generally the pass rates were low, especially in the Commerce Faculty where three out of six subjects had pass rates of 30% or less : Business Economics (30,0%), Accounting (21,8%) and Statistics (15,8%). Other subjects with low pass rates were: Political Science (29,0%), Industrial Psychology (36,4%) and Botany (35,5%).
- (b) The analysis of results of students who did not pass the 1976 semester examinations ( Table 7.21 (B) ) shows the following:

TABLE 7.21

## FIRST-YEAR SEMESTER RESULTS OF 1976 AT THE UNIVERSITY OF DURBAN-WESTVILLE

	Faculty											
	Arts			Commerce						Science		
	Department			Department						Department		
	Political Science	Criminology	Philosophy	Industrial Psychology	Public Administration	Economics	Business Economics	Accounting	Statistics	Botany	Zoology	Computer Science
(A)												
Number of Students	62	50	23	11	41	263	217	303	165	203	210	5
Number Passing First Year	18	26	13	4	28	138	65	66	26	72	94	3
% Passing First Year	29,0	52,0	56,5	36,4	68,3	52,5	30,0	21,8	15,8	35,5	44,8	60,0
Number Failing First Year	44	24	10	7	13	125	152	237	139	131	116	2
(B)												
Analysis of Failure												
DP Refused for both semesters	0	0	1	0	0	0	3	6	31	5	13	1
Failed First Semester, DP refused for Second Semester	6	5	2	2	1	9	49	28	43	22	41	0
Failed First Semester and Dropped out	3	0	0	1	3	13	14	18	8	14	14	0
Passed First Semester, DP refused for Second Semester	14	3	0	1	2	3	34	9	25	6	0	0
Passed First Semester, Failed Second Semester	16	4	2	1	3	52	17	126	23	58	13	0
Passed First Semester and Dropped out	2	2	0	0	2	15	5	8	1	2	1	0
Others	3	10	5	2	2	33	30	42	8	24	34	1
(C)												
% Passing First Year, 1976	29,0	52,0	56,5	36,4	68,3	52,5	30,0	21,8	15,8	35,5	44,8	60,0
% Passing First Year, 1971-1975	69,2	65,2	72,2	80,9	78,8	75,8	65,2	59,7	46,8	42,1	38,2	36,8
Difference (%)	-40,2	-13,2	-15,7	-44,5	-10,5	-23,3	-35,2	-37,9	-31,0	-6,6	+6,6	+23,2

- (i) The highest failure rate was among students who passed the first semester but failed the second. In Accounting, there were 126 students (41,6% of the first-year students in the department), 58 (28,6%) in Botany and 52 (19,8%) in Economics.
  - (ii) Another group with a high failure rate was the one that failed first semester and thus did not qualify for admission to the second. In Statistics there were 43 students (26,1% of the first-year students in the Department); in Business Economics 49 (22,6%); in Zoology 41 (19,5%); in Botany 22 (10,8%); in Accounting 28 (9,2%).
  - (iii) A student group with a low pass rate was the one that passed first semester but was refused DP in the second. The numbers were 34 (15,7%) for Business Economics and 25 (15,2%) for Statistics.
  - (iv) Another group, well represented in the Economics department and in the Science departments, was the one that failed the first semester and dropped out.
  - (v) In the group which failed to obtain DPs for both semesters, Statistics had the highest number, i.e., 31 (18,8%).
- (c) A study of Table 7.21 (C) shows that:
- (i) All semester courses in the Faculties of Arts and Commerce showed substantial declines in the 1976 pass rates when compared with the average pass rates for the years 1971 to 1975.
  - (ii) In the Science Faculty the semester results of 1976 were superior to the non-semester results of 1971-1975 for Zoology and Computer Science but not for Botany.
  - (iii) In the Arts Faculty the decline in the pass rates ranged from 13,2% in Criminology to 40,2% in Political Science.
  - (iv) In the Commerce Faculty the decline in the pass rate was the



highest, with Economics down 23,3%; Statistics down 31,0%; Business Economics down 35,2%; Accounting down 37,9% and Industrial Psychology down 44,5%.

- (d) Overall, the semester system resulted in a substantial decrease in the pass rates in the Faculties of Commerce and Arts but particularly in the Faculty of Commerce.

### 7.13. SUMMARY

Numerous factors were tested for their capacity to predict first-year academic performance of students at the University of Durban-Westville.

The results obtained were as follows:

Degree-Diploma: Diploma students (53,0% passing) performed significantly better than degree students (45,1% passing).

Faculty: Success in first year depended significantly on the Faculty in which the student was enrolled. Pass rates according to Faculty were: Commerce 65,2%; Education 48,6%; Law 43,8%; Arts 38,7%; Science 33,4%.

Full-Time or Part-Time: Full-time students (55,1% passing) performed significantly better than part-time students (30,1% passing).

Sex of Student: No significant differences were found between the first-year performances of male and female students.

Home Province: Among degree students, those from the Transvaal performed significantly better than students from the Cape Province and Natal.

Commuter Distance: The distance travelled daily by the student from his place of residence to the university is significantly related to examination performance. Students travelling longer distances performed

worse in their examinations than those living closer to the university or in the university hostels.

#### Home Language

The home language of the student is significantly related to passing or failing first year. Students from homes where Gujerati, Afrikaans, English and Afrikaans, or Memon was spoken, performed better than other language groups.

#### Age

Age was a significant predictor of performance, with younger students more successful than older ones for degree students but not for diploma.

#### Matriculation Status

Students with full matriculation exemption certificates performed significantly better than students with other certificates.

#### Matriculation Aggregate

Degree students with superior matriculation aggregates were significantly more successful than students with lower aggregate. No such difference was found for Diploma students.

#### Matriculation Subjects and Symbols

Subjects taken for matriculation had significant predictive capacity for university achievement in the first year. Highly significant predictors ( $p < 0,001$ ) were Physical Science, Geography and Accountancy.

Significant predictors were Biology ( $p < 0,01$ ) and Mathematics and Afrikaans ( $p < 0,05$ ). Predictors on a Faculty basis were: Afrikaans ( $p < 0,001$ ), and English and History ( $p < 0,05$ ) for Arts; Accountancy,

Afrikaans and Mathematics (all  $p < 0,05$ ) for Commerce; Mathematics ( $p < 0,001$ ) Afrikaans ( $p < 0,01$ ) and English ( $p < 0,05$ ) for Law; and all subjects, excluding English and Afrikaans for Science (all  $p < 0,001$ ).

#### Number of Courses Taken in First Year

There was a significant relationship between the number of courses taken in the first year and passing or failing. Students at the University of Durban-Westville who took five or more courses performed significantly better than those taking up to four.

#### University Subjects Taken at School Level

Students who took Accountancy, Physical Science and History at Matriculation level, performed significantly better in Accounting I, Physics I or Chemistry I, and History I respectively at university than students who had not.

#### The Semester System

The semester system has caused a significant decrease in pass rates in most departments in which the system was introduced. First-year students of 1976, taking semester examinations for the first time had considerably lower pass rates than students of 1971-1975 who had written annual (end of the year) examinations.



## CHAPTER EIGHT

### GRADUATES OF THE 1971-1976 FIRST-YEAR INTAKE

In this chapter a detailed study is made of the graduates from the first-year students of 1971-1976 at the University of Durban-Westville. In the next chapter a similar analysis is made of the drop-outs from the 1971-1976 first-year intake of students. The data analysed in these two chapters are included in the correlational analysis in chapter 10 in which predictors are sought for graduation or drop-out from the university..

The analysis in this chapter includes:

- (a) the distribution according to Faculty, degree or diploma, male or female, full-time or part-time;
- (b) the number of years taken
  - (i) to pass first year,
  - (ii) to pass second year,
  - (iii) to graduate.
- (c) the major subjects passed by graduates and non-graduates and the time lapse between passing majors and graduation.

#### 8.1. DISTRIBUTION OF GRADUATES AND PERCENTAGE GRADUATING

##### 8.1.1. Distribution of Graduates

Table 8.1 (p. 258) shows the distribution of graduates from the 1971-1976 first-year intake of students.

Table 8.1 reveals the following:

- (a) The graduates numbered 1533 of whom 1229 (80,2%) obtained degrees and 304 (19,8%) obtained diplomas.

TABLE 8.1

DISTRIBUTION OF GRADUATES FROM THE 1971-1976 FIRST-YEAR INTAKE, ACCORDING TO FACULTY, DEGREE OR DIPLOMA, FULL-TIME OR PART-TIME, MALE OR FEMALE

Faculty	Group	Full-Time			Part-Time			Male	Female	Total
		Male	Female	Total	Male	Female	Total			
Arts	Degree	165	236	401	52	11	63	217	247	464
	Diploma	10	6	16	-	-	-	10	6	16
	Total	175	242	417	52	11	63	227	253	480
Commerce	Degree	293	39	332	3	0	3	296	39	335
	Diploma	4	1	5	-	-	-	4	1	5
	Total	297	40	337	3	0	3	300	40	340
Education	Degree	52	63	115	-	-	-	52	63	115
	Diploma	142	141	283	-	-	-	142	141	283
	Total	194	204	398	-	-	-	194	204	398
Law	Degree	15	4	19	-	-	-	15	4	19
Science	Degree	215	81	296	-	-	-	215	81	296
Total	Degree	740	423	1163	55	11	66	795	434	1229
	Diploma	156	148	304	0	0	0	156	148	304
	Degree & Diploma	896	571	1467	55	11	66	951	582	1533

(b) The distribution of the total of 1533 according to Faculties was:

480	(31,3%)	from Arts,
398	(26,0%)	from Education,
340	(22,2%)	from Commerce,
296	(19,3%)	from Science and
19	(1,2%)	from Law.

(c) Of the total of 1229 degrees awarded

464	(37,8%)	were from Arts,
335	(27,3%)	from Commerce,
296	(24,1%)	from Science,
115	(9,4%)	from Education and
19	(1,5%)	from Law.

(d) Of the 304 diplomas awarded Education had the major output of 283 (93,1%) followed by Arts with 16 (5,3%) and Commerce 5 (1,6%).

(e) The greater proportion of the graduates were full-time : 1467 (95,7%) out of 1533. It should be noted that only the Arts and Commerce Faculties enrolled first-year part-time students.

(f) Male graduates numbered 951 (62,0%) while females numbered 582 (38,0%). In the Faculties of Arts and Education the differences between the numbers of male and female graduates were small but in the remaining Faculties males comprised large majorities.

#### 8.1.2. Percentage of New First-Year Students Graduating

Table 8.2 (p. 260) shows the distribution of graduates according to Faculty. Also indicated are those students who are still studying.

The following observations and comparisons relate to Table 8.2:

(a) The percentage of 1971-1976 first-year students who had graduated (by the end of 1980 when data had to be finalised for this research)



TABLE 8.2

- (a) GRADUATION RATES OF 1971-1976 FIRST-YEAR STUDENTS AND  
 (b) STUDENTS STILL STUDYING : DISTRIBUTIONS ACCORDING TO FACULTY

Faculty	Graduation and Graduation Rates			Students Still Studying	
	First-Year Student Numbers	Number Graduating	Percentage Graduating	Number Still Studying	Percentage Still Studying
Arts	1133	480	42,4	57	5,0
Commerce	1029	340	33,0	111	10,8
Education	672	398	59,2	67	10,2
Law	153	19	12,4	18	11,8
Science	1133	296	26,1	66	5,8
Degree	3556	1229	34,6	288	8,1
Diploma	564	304	53,9	31	5,5
Total	4120	1533	37,2	319	7,7

was 37,2%, with 7,7% of the students still studying. The rest (55,1%) had dropped out. These drop-outs will be discussed in the next chapter (9).

- (b) The Education Faculty was far more successful than the others. The percentages of students graduating according to Faculty were:

Education	59,2%
Arts	42,4%
Commerce	33,0%
Science	26,1% and
Law	12,4%.

Considerable differences were found between Faculties.

- (c) The 37,2% graduation rate for the University of Durban-Westville is

much lower than the 67% obtained by Erens and Louw (1978, 56) for the recent period 1969-1975 for White students at South African residential universities.

- (d) For degree students at the University of Durban-Westville, the percentage graduating was 34,6%. This value is considerably less than that of 54,6% for White students at South African residential universities obtained by Steyn (1963) for the period 1954-1957. The figures above in (c) and (d) for the University of Durban-Westville therefore make very poor comparisons with corresponding ones from White universities in South Africa.
- (e) To find comparable results from overseas countries presented problems mainly because of the differences in the university systems of different countries and the fact that longitudinal studies overseas have been conducted on national bases.

However, the findings of two countries with university systems similar to that in South Africa are presented. In Australia, the Vice-Chancellors' Committee reported in 1967 a 64% graduation of students who had enrolled in 1961, with a further 5% still studying. In New Zealand, the Vice-Chancellors' Committee found in 1973 that 55% of the 1967 intake of first-year students had graduated with 5% of the students still at university (Erens and Louw, 1978, 52).

The graduation rate at the University of Durban-Westville was not only considerably lower than that at White universities in South Africa but also much lower than those at overseas universities. In Great Britain which has a highly selected intake of students, the University Grants Committee (1974) estimated a high 85% graduation rate for the United Kingdom universities for the period 1965-1970.

- (f) Diploma students at the University of Durban-Westville were far more

successful - 53,9% graduating - than degree students - 34,6%  
graduating.

## 8.2. NUMBER OF YEARS TAKEN TO PASS FIRST YEAR

Table 8.3 contains data relating to the number of years taken by the graduates of the 1971-1976 first-year intakes to pass first year.

TABLE 8.3

NUMBER OF YEARS TAKEN TO PASS FIRST YEAR BY GRADUATES FROM FIRST-YEAR  
INTAKES : 1971-1976

Group	Number of Graduates who Passed First Year in								Total	
	One Year		Two Years		Three Years		Four Years			
	No.	%	No.	%	No.	%	No.	%	No.	%
Degree	849	69,1	346	28,2	32	2,6	2	0,2	1229	100
Diploma	238	78,3	58	19,1	7	2,3	1	0,3	304	100
Total	1087	70,9	404	26,4	39	2,5	3	0,2	1533	100

Table 8.3 shows that of the 1533 students who completed their degrees or diplomas at the University of Durban-Westville

- (a) 70,9% passed first year at the first attempt,
- (b) 26,4% passed first year at the second attempt and
- (c) 2,7% passed at the third or fourth attempt.

Table 8.4 (p. 263) shows the number of graduates from the 1971-1976 first-year students, taking one, two or more years, to pass first year in each of the years 1971-1976 for degrees and for diplomas.



TABLE 8.4

NUMBER OF YEARS TAKEN TO PASS FIRST YEAR BY GRADUATES : DEGREE AND DIPLOMA

Year	Degree				Diploma			
	Number of students passing first year in				Number of students passing first year in			
	One Year		Two Years or more		One Year		Two Years or more	
	No.	%	No.	%	No.	%	No.	%
1971	133	67,5	64	32,5	28	87,5	4	12,5
1972	162	63,0	95	37,0	37	92,5	3	7,5
1973	165	67,1	81	32,9	26	83,9	5	16,1
1974	139	72,4	53	27,6	45	73,8	16	26,2
1975	116	79,5	30	20,5	47	75,8	15	24,2
1976	134	70,2	57	29,8	55	71,4	22	28,6
1971-1976	849	69,1	380	30,9	238	78,3	65	21,7

The following observations and inferences flow from Table 8.4:

(a) Degree Students:

- (i) Among degree students there was a marked increase in the percentage of students passing first year in one year during 1972-1975, from 63,0% in 1972 to 79,5% in 1975.
- (ii) The distribution in Table 8.4 was subjected to a  $\chi^2$  test. The value obtained was 12,50 for degree students ( $p < 0,05$ ). There were significant differences from year to year between those taking one year to pass the first year and those taking more than one year. In 1972, for example, of the first-year intake who graduated, 37,0% took more than one year to pass the first year while in 1975 only 20,5% required more than one year.

(b) Diploma Students:

- (i) Of the Diploma students who graduated the percentage taking one year to pass first year decreased over the period 1971-1976.
- (ii) The  $\chi^2$  value for the diploma distribution was 9,13 ( $p > 0,05$ ).

Therefore, the difference observed in (b)(i) was not significant.

The results for each Faculty were studied next to ascertain the number of years taken by its graduates - degree and diploma - to complete first year.

Table 8.5 shows the distribution of graduates for the period 1971-1976 according to Faculty, and the number of years taken to pass the first year. (Appendix 18, p. 414 contains more details, e.g., distribution of graduates on a Faculty basis according to degree, diploma, total, full-time, part-time, male, female).

TABLE 8.5

NUMBER OF YEARS TAKEN TO PASS FIRST YEAR BY GRADUATES OF THE 1971-1976 FIRST-YEAR STUDENT INTAKES ACCORDING TO FACULTY

Faculty	Number of Years Taken to Pass First Year				Total	
	One Year		Two or more years			
	No.	%	No.	%	No.	%
Arts	295	61,5	185	38,5	480	100
Commerce	306	90,0	34	10,0	340	100
Education	315	79,1	83	20,9	398	100
Law	13	68,4	6	31,6	19	100
Science	158	53,4	138	46,6	296	100
Total	1087	70,9	446	291	1533	100

The following observations and inferences relate to Table 8.5:

(a) Of the graduates who took only one year to pass first year

Commerce led with	90,0%,
followed by Education	79,1%
Law	68,4%
Arts	61,5%
and Science	53,4%.

With regard to the high 90,0% for the Commerce Faculty, it must be remembered that for promotion to the second year, the Commerce Faculty required a pass in at least two subjects. Other Faculties required at least three.

(b) The following  $\chi^2$  tests were conducted on the data in Table 8.5:

(i) A  $\chi^2$  was computed for the distribution of all five Faculties.

The value of  $\chi^2$  obtained was 138,18 ( $p < 0,001$ ). Over the various Faculties there were highly significant differences between the proportions of students taking one year or more than one year to complete first year.

(ii) As the numbers for the Law Faculty were very small a  $\chi^2$  was calculated for the Faculties with Law excluded. The  $\chi^2$  obtained was 38,12 ( $p < 0,001$ ). Differences among the other Faculties were still highly significant.

(iii) Because of the imbalance caused by Commerce's 90%, a  $\chi^2$  was computed, excluding the Commerce Faculty. A  $\chi^2$  of 34,43 was obtained ( $p < 0,001$ ). Therefore even with Commerce excluded, the differences among the remaining four Faculties were highly significant.

(iv) Another  $\chi^2$  was computed for degree students only. The  $\chi^2$  obtained was 126,62 ( $p < 0,001$ ). Differences were highly



significant.

Table 8.6 shows the distribution of male and female graduates (Degree and Total) taking one year, or two or more years, to pass first year.

TABLE 8.6

MALE-FEMALE GRADUATES FROM 1971-1976 FIRST-YEAR STUDENTS: TOTAL AND DEGREE

Group	Sex	Number of Students Passing First Year in				Total
		One Year		Two Years or More		
		No.	%	No.	%	
Total	Male	689	72,5	262	27,5	951
	Female	398	68,4	184	31,6	582
Degree	Male	563	70,8	232	29,2	795
	Female	286	65,9	148	34,1	434

The following observations and inferences are made from Table 8.6:

(a) Total:

- (i) More males (72,5%) than females (68,4%) took only one year to complete the first year while more females (31,6%) than males (27,5%) took two years or more.
- (ii) The above differences were tested for significance and a  $\chi^2$  value of 3,01 ( $p > 0,05$ ) was obtained. The differences were not significant.

(b) Degree:

A  $\chi^2$  for degree graduates only yielded a value of 3,27 ( $p > 0,05$ ). Therefore, while a greater proportion of males (70,8%) than females (65,9%) passed first year in one year, the difference was not significant.

(c) Diploma:

The  $\chi^2$  for diploma students yields a value of 1,6 ( $p > 0,05$ ). There was no significant difference between male and female diploma students over the number of years taken to pass first year.

The number of years which full-time graduates and part-time graduates had taken to pass first year appears in Table 8.7

TABLE 8.7

PART-TIME AND FULL-TIME GRADUATES FROM THE 1971-1976 FIRST YEAR STUDENTS AND NUMBER OF YEARS TAKEN TO PASS FIRST YEAR : DEGREE AND DIPLOMA

Full-Time or Part-Time	Number of Students Passing First Year in				Total
	One Year		Two Years or more		
	No.	%	No.	%	
Full-Time	1046	71,3	421	28,7	1467
Part-Time	41	62,1	25	37,9	66

Table 8.7 indicates that a greater proportion of full-time students (71,3%) took one year to pass the first year than part-time students (62,1%).

However, a  $\chi^2$  value of 2,18 ( $p > 0,05$ ), showed that the difference was not significant.

### 8.3. NUMBER OF YEARS TAKEN BY GRADUATES TO PASS SECOND YEAR

The number of years as a "second-year" student denotes the number of years spent studying after completing the requirements of the first year and before being eligible to take the major subjects of the degrees enrolled for. For three-year diplomas the major year is the third and final year. For two-year diplomas the second year is the final year. The

number of years required to pass the second year of study by degree and diploma students appear in Table 8.8 (p. 269).

The following observations are made from Table 8.8:

(a) Three-year degrees: the number of years taken to complete the requirements of the second year of study was as follows:

670 graduates (70,9%) took one year,  
 325 graduates (23,8%) took two years,  
 42 graduates (4,4%) took three years,  
 7 graduates (0,7%) took four years and  
 1 student took more than 4 years.

(b) Four-Year Degrees: 118 graduates (42,8%) spent one year to complete the second-year studies (B.Paedogics and B. Procurationis students study for their majors in the third year of study), 126 graduates (45,7%) took 2 years over the second year, 32 graduates (11,6%) took more than 2 years.

(c) Diploma: the number of years taken by diploma graduates to complete their second year of study was as follows:

235 (77,3%) took one year,  
 62 (20,4%) took two years and  
 7 (2,3%) took more than 2 years.

#### 8.4 NUMBER OF YEARS TAKEN BY GRADUATES AND NON-GRADUATES TO COMPLETE THEIR MAJORS

Data was collected to establish the number of years it took graduates and non-graduates to pass the major subjects for their degrees. For most degrees the major courses were included in the final year of the curriculum. The exceptions included the following degrees: Bachelor of Paedogics, where the teaching majors may be taken in the third year of the four-year



TABLE 8.8

NUMBER OF YEARS TAKEN BY GRADUATES TO PASS SECOND YEAR

Group	Minimum Period Required for Degree	Number of Students Passing Second Year in										Total
		1 year		2 years		3 years		4 years		5 years		
		No.	%	No.	%	No.	%	No.	%	No.	%	
Degree	3 years	670	70,9	225	23,8	42	4,4	7	0,7	1	0,1	945
	4 years	118	42,8	126	45,7	25	9,1	4	1,4	3	1,1	276
	5 years	0	0	0	0	2	66,7	1	33,3	0	0	3
	6 years	0	0	0	0	1	20,0	4	80,0	0	0	5
	Total	788	64,1	351	28,6	70	5,7	16	1,3	4	0,3	1229
Diploma	2 years	8	88,9	1	11,1	0	0	0	0	0	0	9
	3 years	227	77,0	61	20,7	6	2,0	1	0,3	0	0	295
	Total	235	77,3	62	20,4	6	2,0	1	0,3	0	0	304
Total	Total	1023	66,7	413	26,9	76	5,0	17	1,1	4	0,3	1533

degree; Baccalaureus Procurationis where Private Law III can be offered in the third year of the four-year degree.

Table 8.9 shows the distribution of students according to the number of years taken to pass their major subjects for degrees. The degrees appear under three-year, four-year, five-year and six-year. (Appendix 19, p.415 contains more details of the number of years taken to pass major subjects).

TABLE 8.9

DISTRIBUTION OF STUDENTS ACCORDING TO THE NUMBER OF YEARS TAKEN TO COMPLETE MAJORS

Degree	Number of students completing majors in								Total No.
	Minimum Number of Years		Minimum plus One Year		Minimum plus Two Years		Minimum Plus Two or more Years		
	No.	%	No.	%	No.	%	No.	%	
3-year Degree	486	48,9	327	32,9	158	15,9	22	2,2	993
4-year Degree	72	22,3	153	47,4	84	26,0	14	4,3	323
5-year Degree	0	0	2	66,7	1	33,0	0	0	3
6-year Degree	1	20	4	80	0	0	0	0	5
Total Degrees	559	42,2	486	36,7	243	18,4	36	2,7	1324

Table 8.9 includes graduates as well as students who completed their majors but did not graduate.

Table 8.9 provides the following facts:

- (a) Almost all degree students - 1316 out of 1324 (99,4%) - were enrolled either for 3-year degrees or for 4-year degrees. Of the degree students 75,0% were enrolled for three-year degrees and 24,4% for four-year degrees.

- (b) While 48,9% of those enrolled for three-year degrees completed their majors in the minimum time, only 22,3% of the four-year degree students did so. Of the four-year degree students 47,4% took one year more than the minimum time to complete their majors.
- (c) Of the students who took the minimum plus two years to complete their majors, the three-year degree students comprised 15,9% and the four-year degree 26,0%. A small percentage of students from both groups took more than the minimum plus 2 years to complete majors.
- (d) When the number of years taken by students to complete their second year of study (Table 8.8) is compared with the time taken to complete their majors, it is clear that passing the majors constitutes a bigger hurdle, which further increases the time students take to complete their university studies.

#### 8.5. MAJOR SUBJECTS PASSED FOR DEGREES BY GRADUATES AND NON-GRADUATES : 1972-1976

Major subjects passed in the various departments by students enrolled for degrees are discussed below for each of the five Faculties.

Table 8.10 (p. 272) shows the distribution of majors for the Faculty of Arts for the five-year period, 1972 to 1976. The subjects are arranged in descending order of number of majors awarded per subject.

A study of Table 8.10 reveals that:

- (a) Popular Arts majors were English, Psychology, History and Social Work, all exceeding 50 in number for the period 1972-1976. With the exception of History, where males outnumbered females, the other subjects were female-dominated.
- (b) Majors ranging in numbers between 39 and 49 were Geography, Sociology and Philosophy.



TABLE 8.10

DISTRIBUTION OF MAJOR SUBJECTS PASSED IN THE FACULTY OF ARTS : 1972-1976

Major Subjects	Number Passing Major				
	Total	Male		Female	
		No.	%	No.	%
English	128	53	41,4	75	58,6
Psychology	103	22	21,4	81	78,6
History	98	63	64,3	35	35,7
Social Work	66	1	1,5	65	98,5
Geography	48	24	50,0	24	50,0
Sociology	42	2	4,8	40	95,2
Philosophy	39	20	51,3	19	48,7
Physical Education	24	16	66,7	8	33,3
Speech and Drama	21	7	33,3	14	66,7
Arabic	20	10	50,0	10	50,0
Science of Religion	17	14	82,4	3	17,6
Political Science	16	9	56,3	7	43,8
Afrikaans-Netherlands	13	5	38,5	8	61,5
Criminology	11	6	54,5	5	45,5
Oriental Studies	9	3	33,3	6	66,7
History of Art	7	2	28,6	5	71,4
Islamic Studies	6	1	16,7	5	83,3
Design	6	2	33,3	4	66,7
Anthropology	5	2	40,0	3	60,0
Music	5	0	0,0	5	100,0
Art	4	3	75,0	1	25,0
Sanskrit	4	2	50,0	2	50,0
Hindi/Tamil	3	2	66,7	1	33,3
Library Science	3	2	66,7	1	33,3
Indology	2	1	50,0	1	50,0
French	1	0	0,0	1	100,0
Latin	1	0	0,0	1	100,0
Painting	1	0	0,0	1	100,0
Total	703	272	38,7	431	61,3

(c) Aesthetic and Cultural majors and (generally) languages outside the two official ones, were taken by a minority.

(d) Of the 703 majors completed in the Arts Faculty females passed 61,3% of them and males 38,7%.

It is obvious that "bread and butter" subjects are preferred by Indian students. The Indian Community is still emancipating itself from severe socio-economic strictures. At present, pre-occupation with vocational and professional subjects is natural with a community of whom a majority lives below the poverty datum line (Behr, 1981, 10).

The distribution of major subjects passed by degree students in the Faculty of Commerce for the period 1972 to 1976 is contained in Table 8.11

TABLE 8.11

MAJOR SUBJECTS PASSED IN THE FACULTY OF COMMERCE : 1972-1976

Major Subjects	Number Passing				
	Total	Male		Female	
		No.	%	No.	%
Accounting	210	187	89,0	23	11,0
Economics	197	162	82,2	35	17,8
Business Economics	191	159	83,2	32	16,8
Industrial Psychology	11	9	81,8	2	18,2
Mathematical Statistics	7	6	85,7	1	14,3
Public Administration	7	6	85,7	1	14,3
Statistics	6	4	66,7	2	33,3
Auditing	2	2	100,0	0	0
Total	631	535	84,8	96	15,2

The following deductions are made from Table 8.11:

- (a) The Faculty of Commerce offered a much smaller range of electives (subjects) than Arts.
- (b) Of the 8 majors shown in Table 8.11, three were very prominent. These were Accounting, Economics and Business Economics, with about 200 students obtaining majors in each. The remaining subjects had very small numbers.
- (c) There was a heavy male domination in Commerce majors. Of the 631 students who passed majors, 535 were males, which represented 84,8%.

Table 8.12 shows the distribution of major subjects passed in the Faculty of Education for degree purposes. Only two subjects were involved.

TABLE 8.12

MAJOR SUBJECTS PASSED IN THE FACULTY OF EDUCATION : 1972-1976

Major Subjects	Number Passing				
	Total	Male		Female	
		No.	%	No.	%
Education	113	56	49,6	57	50,4
Home Economics Major	1	0	0,0	1	100

According to Table 8.12 males and females were almost equally represented in the Education major. This subject is compulsory for all Bachelor of Paedagogics students and is also taken by some Bachelor of Arts students.

Table 8.13 (p. 275) shows the distribution of major subjects passed in the Faculty of Law for degree purposes during the period 1972-1976.



TABLE 8.13

MAJOR SUBJECTS PASSED IN THE FACULTY OF LAW : 1972-1976

Major Subjects	Number Passing				
	Total	Male		Female	
		No.	%	No.	%
Private Law	182	109	59,9	73	40,7
Roman Law	103	61	59,2	42	40,8
Mercantile Law	21	15	71,4	6	28,6
Total	306	185	60,5	121	39,5

A study of Table 8.13 shows that:

- (a) Private Law - a three-year major - was taken by most students (182).  
 Roman Law - a two-year major - was second with 103 students.  
 Mercantile Law also a two-year major was third with 21.
- (b) Male students formed the majority among the Law majors passed; 185 males representing 60,5% of the total.

Table 8.14 (p. 276) shows the distribution of major subjects passed in the Faculty of Science for the period 1972-1976.

The following observations are made from Table 8.14:

- (a) In terms of popularity Microbiology with 95 majors (20,7%) and Physiology with 93 majors (20,2%) led the Science majors. Chemistry 52 (11,3%) and Biochemistry 45 (9,8%) followed some distance behind. Pharmacy majors numbered 35 and Mathematics 34. Botany 24, Physics 20, and Zoology 19, came next.

TABLE 8.14

MAJOR SUBJECTS PASSED IN THE FACULTY OF SCIENCE : 1972-1976

Major Subjects	Number Passing				
	Total	Male		Female	
		No.	%	No.	%
Microbiology	95	73	76,8	22	23,2
Physiology	93	69	74,2	24	25,8
Chemistry	57	44	77,2	13	22,8
Biochemistry	45	32	71,1	13	28,9
Pharmacy Majors	35	22	62,9	13	37,1
Mathematics	34	30	88,6	4	11,4
Botany	24	17	70,8	7	29,2
Physics	20	19	95,0	1	5,0
Zoology	19	10	52,6	9	47,4
Computer Science	14	14	100,0	0	0
Physiotherapy (Majors)	14	1	7,1	13	92,9
Applied Mathematics	10	10	100,0	0	0,0
Total	460	341	74,1	119	25,9

(b) Science majors were clearly male-dominated with 341 males representing 74,1% of the total of 460 students.

#### 8.6. NUMBER OF YEARS BETWEEN STUDENTS' PASSING MAJORS AND GRADUATING

An analysis was made of the period that elapsed between the passing of the major subjects and the completion of the degree, i.e., graduation.

Table 8.15 (p. 277) shows this distribution.

TABLE 8.15

DIFFERENCE IN TIME (YEARS) BETWEEN PASSING MAJORS AND GRADUATION : DEGREE

Faculty	Number of Students Graduating								Total	
	in same year as majors		One year after majors		Two years after majors		Two plus years after majors			
	No.	%	No.	%	No.	%	No.	%	No.	%
Arts	368	79,3	67	14,4	11	2,4	18	3,9	464	100
Commerce	170	50,7	101	30,1	38	11,3	26	7,8	335	100
Education	17	14,8	76	66,1	16	13,9	6	5,2	115	100
Law	7	36,8	8	42,1	4	21,1	0	0,0	19	100
Science	247	83,4	31	10,5	10	3,4	8	2,7	296	100
Total	809	65,8	283	23,0	79	6,4	58	4,7	1229	100

The following observations and inferences are made from Table 8.15:

- (a) For the 1229 students who graduated, the time lapse between passing majors and graduating was as follows: 809 (65,8%) graduated in the same year they passed majors; 283 (23,0%) one year after completing majors; 6,4% two years after and 4,7% more than two years after.
- (b) Because the B. Procurationis and B. Paedagogics students could complete their majors in the third year of the 4-year degree or could, under certain circumstances carry the major into the fourth year; a  $\chi^2$  for the distribution in Table 8.15 was calculated with Law and Education Faculties omitted. The  $\chi^2$  value obtained for Arts, Commerce and Science was 111,48 ( $p < 0,001$ ). Therefore, there were highly significant differences among the distributions in Table 8.15, for these three Faculties. Science (83,4%) and Arts (79,3%) had significantly more students graduating in the year in which they



completed their majors, than Commerce students (50,7%).

With the studies of the time taken by students to pass the first year, the second year and the majors completed, analyses are presented in the next section relating to the time taken by students to graduate.

#### 8.7. NUMBER OF YEARS TAKEN TO GRADUATE BY DEGREE AND DIPLOMA STUDENTS

An analysis was made of data for degrees and diplomas, to establish the time taken by students to complete their studies.

Appendix 20, p. 416, shows the number of students who completed their studies in the minimum time, minimum plus one year, minimum plus two years, more than minimum plus two years. A male-female breakdown is also included.

Table 8.16 (p. 279) shows the number of students graduating, expressed as a percentage of initial enrolment, and distributed according to the number of years taken to graduate.

The following observations and inferences relate to Table 8.16:

- (a) The 580 students graduating in minimum time represented only 14,1% of the total first-year enrolment for the period 1971-1976.  
A further 13,7% graduated one year later ; 6,6% took two more years than the minimum time. The percentage of students taking more than the minimum plus two years to graduate was 2,8%.
- (b) The findings at the University of Durban-Westville make unfavourable comparisons with those at some other universities in South Africa and overseas. Bligh (1978, 88) reports that the time taken to graduate in the United States of America varied as follows: in fifteen most selective private universities 80% - 85% of the students entering universities

TABLE 8.16

DISTRIBUTION OF GRADUATES AS A PERCENTAGE OF INITIAL ENROLMENT ACCORDING TO NUMBER OF YEARS TAKEN TO GRADUATE

	Number of students graduating in								Total	
	Minimum no. of years		Minimum plus one year		Minimum plus two years		Minimum plus two plus years			
	No.	% of initial enrolment	No.	% of initial enrolment	No.	% of initial enrolment	No.	% of initial enrolment	No.	% of initial enrolment
Degree	426	12,0	465	13,1	233	6,6	105	3,0	1229	34,6
Diploma	154	27,3	101	17,9	38	6,7	11	2,0	304	53,9
Total	580	14,1	566	13,7	271	6,6	116	2,8	1533	37,2

graduated in the minimum time; in large State Universities 35% - 45% did so; the figure for State Colleges ranged between 15% and 25%.

In South Africa, Steyn (1963) obtained the following percentages for new registration at White residential universities for the period 1954-1957: 54,6% of the total initial enrolment of students graduated eventually: 38,1% graduated in the minimum time; 12,1% took a year longer; 4,1% took the minimum period plus two years; while 0,3% took even longer.

Table 8.17 shows the 1533 graduates of the University of Durban-Westville distributed according to the number of years taken to graduate.

TABLE 8.17

UNIVERSITY OF DURBAN-WESTVILLE GRADUATES AND THE NUMBER OF YEARS TAKEN TO GRADUATE : 1971-1976 FIRST-YEAR INTAKE

	Number of Students Graduating in								Total	
	Minimum number of years		Minimum plus one year		Minimum plus two years		Minimum plus two plus years			
	No.	%	No.	%	No.	%	No.	%		
Degree	426	34,7	465	37,8	233	19,0	105	8,5	1229	100
Diploma	154	50,7	101	33,2	38	12,5	11	3,6	304	100
Total	580	37,8	566	36,9	271	17,7	116	7,6	1533	100

Table 8.17 shows that:

(a) Of the degree students

34,7% took the minimum number of years to graduate,

37,8% took one year longer,



19,0% took the minimum plus two years,

8,5% took even longer.

(b) As far as the diploma students are concerned

50,7% obtained the qualifications in the minimum time,

33,2% took a year longer,

12,5% took two years more than the minimum time,

3,6% took even longer.

The number of years taken to graduate was analysed on the basis of the sex of the student for degrees and for diplomas. The distributions are contained in Table 8.18 (p. 282).

TABLE 8.18

PERCENTAGE DISTRIBUTION OF MALE AND FEMALE STUDENTS OF THE 1971-1976  
FIRST-YEAR INTAKE ACCORDING TO THE NUMBER OF YEARS TAKEN TO GRADUATE

Degree or Diploma	Sex	Number of Students Graduating in						Total
		Minimum Time	Minimum plus one year	Minimum plus two years	Minimum plus three years	Minimum plus four years	Minimum plus five years	
		%	%	%	%	%	%	
Degree	Male	32,2	35,6	22,1	5,9	2,6	1,6	795
	Female	39,2	41,9	13,1	2,5	1,8	1,4	434
	Total	34,7	37,8	19,0	4,6	2,4	1,5	1229
Diploma	Male	51,9	30,1	13,5	2,6	1,3	0,6	156
	Female	49,3	36,5	11,5	0,7	1,3	0,7	148
	Total	50,7	33,2	12,5	1,6	1,3	0,7	304

The following inferences were drawn from Table 8.18:

- (a)  $\chi^2$  tests were applied to the male and female distributions of the graduates for degrees and diplomas. (The actual numbers were used in the calculations).
- (i) For degree students a  $\chi^2$  value of 26,20 ( $p < 0,01$ ) was obtained. There was, therefore, a significant difference between the periods taken by males and females to graduate. Males took significantly longer to graduate than females.
- (ii) For diploma students a  $\chi^2$  value of 5,28 ( $p > 0,05$ ) was obtained. Thus, there was no significant difference between the sexes among diploma students over the time taken to graduate.
- (b) A  $\chi^2$  test was applied to ascertain whether significant differences existed between degree and diploma students over the period required for graduation. A  $\chi^2$  value of 31,62 was obtained ( $p < 0,001$ ). There was, therefore, a highly significant difference between the 2 groups over the time taken to graduate. Degree students took significantly longer to graduate than diploma students.

#### 8.8. NUMBER OF YEARS TAKEN BY STUDENTS TO GRADUATE ACCORDING TO FACULTY, DEGREE, DIPLOMA

Table 8.19 (p. 283) shows the distribution of the number of years taken by students to obtain degrees and diplomas in each Faculty. (A more detailed distribution appears in Appendix 21, p. 417, where data for Total, Degree, Diploma, Full-Time, Part-Time, Male and Female analyses are provided).

The following observations and inferences are made from Table 8.19:

- (a) The Education Faculty had the highest percentage of students graduating in the minimum time - 52,3%; followed by Law 42,1%; Arts 38,3%; Commerce 28,5%; Science 28,0%.



TABLE 8.19

DISTRIBUTION OF GRADUATES FROM 1971-1976 FIRST-YEAR INTAKE ACCORDING TO NUMBER OF YEARS TAKEN TO GRADUATE PER FACULTY.

Faculty	Number of Students Graduating in								Total	Percentage Enrolment Graduating
	Minimum Time		Minimum plus one year		Minimum plus two years		Minimum plus two plus years			
	No.	%	No.	%	No.	%	No.	%		
Arts	184	38,3	180	37,5	83	17,3	33	6,9	480	42,4
Commerce	97	28,5	128	37,6	78	22,9	37	10,9	340	33,0
Education	208	52,3	129	32,4	45	11,3	16	4,0	398	59,2
Law	8	42,1	7	36,8	3	15,8	1	5,3	19	12,4
Science	83	28,0	122	41,2	62	20,9	29	9,8	296	26,1
Total	580	37,8	566	36,9	271	17,7	116	7,6	1533	37,2

- (b) Science had the highest percentage (44,6%) among students taking the minimum plus one year to graduate, with the other Faculties ranging from 32,4% to 37,6%.
- (c) Of the students taking the minimum time or one year more than the minimum, Education had the highest percentage - 84,7%; followed by Law 78,9%; Arts 75,8%; Science 72,6%; Commerce 66,1%.
- (d) Of the students taking two or more years longer than the minimum, Commerce had the highest percentage - 33,8%; followed by Science 30,8%; Arts 24,2%; Law 21,1%; Education 15,3%.
- (e) (i) A  $\chi^2$  was computed to ascertain whether the time taken to graduate was dependent on Faculty or not. A  $\chi^2$  value of 71,34 ( $p < 0,001$ ) was obtained. Therefore, there were highly significant differences among the Faculties over the number of



years taken to graduate.

- (ii) Because of the large number of diploma students in the Faculty of Education and the very small observed entries from Law, a  $\chi^2$  was computed for graduates in Arts, Commerce and Science only. The  $\chi^2$  value obtained was 16,57 ( $p < 0,05$ ). The exclusion of Education and Law Faculties - in particular, Education - reduced the magnitude of significance from  $p < 0,001$  to  $p < 0,05$  for the remaining three Faculties. Arts students graduated more quickly than Science students who, in turn, fared better than Commerce students.

A study of the time taken to graduate by degree students only was made. Table 8.20 shows the distribution of the number of years taken by degree students to graduate.

TABLE 8.20

DISTRIBUTION OF DEGREE STUDENTS OF 1971-1976 (FIRST-YEAR INTAKE ACCORDING TO NUMBER OF YEARS TAKEN TO GRADUATE PER FACULTY)

Faculty	Number of Students Graduating in								Total	Percentage of Enrolment Graduating
	Minimum Time		Minimum plus one year		Minimum plus two years		Minimum plus two plus years			
	No.	%	No.	%	No.	%	No.	%		
Arts	175	37,7	174	37,5	82	17,7	33	7,1	464	44,1
Commerce	96	28,7	125	37,3	77	23,0	37	11	335	34,7
Education	64	55,7	37	32,2	9	7,8	5	4,3	115	45,5
Law	8	42,1	7	36,8	3	15,8	1	5,3	19	12,4
Science	83	28,0	122	41,2	62	20,9	29	9,8	296	26,1
Total	426	34,7	465	37,8	233	19,0	105	8,5	1229	34,6

The following observations and inferences relate to Table 8.20:

- (a) The exclusion of the diploma students made little difference to the Faculties of Arts and Commerce; and no difference to Law and Science. However, Education showed an improvement, with 55,7% of its degree students passing in the minimum time.
- (b)  $\chi^2$  was computed for degrees and the results were as follows:
  - (i) for all five Faculties:  $\chi^2 = 43,53$  ( $p < 0,001$ )
  - (ii) for four Faculties with Law excluded:  $\chi^2 = 43,53$  ( $p < 0,001$ );
  - (iii) for the Faculties of Arts, Commerce and Science:  $\chi^2 = 14,48$  ( $p < 0,05$ ).

All  $\chi^2$  values were significant but  $\chi^2$  was highly significant ( $p < 0,001$ ) when Law was excluded and moderately significant ( $p < 0,05$ ) when Education and Law were excluded. The findings for degrees differed little from those for the entire student body.

Only one set of findings corresponding to those above was available from previous research. This was the study of Steyn (1963) who provides graduation data for degree students in Arts, Commerce and Science at White residential universities in South Africa for the years 1954-1957. Steyn's data are compared with those of the Faculties of Arts, Commerce and Science at the University of Durban-Westville. Degree students only are involved in Table 8.21 (p. 286)

Table 8.21 reveals that not only were the students from the University of Durban-Westville markedly less successful than students at White residential universities in South Africa in all three directions but also that those who succeeded at the University of Durban-Westville took longer to graduate than students at White residential universities.



TABLE 8.21

DISTRIBUTION OF GRADUATES AMONG DEGREE STUDENTS ACCORDING TO NUMBER OF YEARS TAKEN TO GRADUATE : INDIANS AT THE UNIVERSITY OF DURBAN-WESTVILLE (1971-1976) AND WHITES AT RESIDENTIAL UNIVERSITIES IN SOUTH AFRICA (1954-1957)

Faculty	University	Percentage Graduating in				Total Graduating
		Minimum no. of years	Minimum plus one year	Minimum plus two years	Minimum plus two plus years	
		%	%	%	%	
Arts	White Universities	50,0	11,4	1,7	0,2	63,3
	University of Durban-Westville	16,7	16,6	7,8	3,1	44,2
Commerce	White Universities	26,9	11,0	5,1	0,9	43,9
	University of Durban-Westville	9,9	12,9	8,0	3,8	34,6
Science	White Universities	30,1	12,6	4,6	0,3	47,6
	University of Durban-Westville	7,3	11,7	5,5	2,6	27,1

### 8.9. SUMMARY

This chapter was concerned mainly with the analysis of data of those students from the 1971-1976 first-year intake who graduated from the University of Durban-Westville. The analysis reveals the following facts:

DISTRIBUTION OF GRADUATES: Of the 1533 who graduated 480 (31,3%) were from the Arts Faculty; 398 (26,0%) from Education; 340 (22,0%) from Commerce; 296 (19,3%) from Science and 19 (1,2%) from Law. Degrees (1229) were distributed as follows: Arts 37,8%; Commerce 27,3%;



Science 24,1%; Education 9,4%; Law 1,5%. Diplomas were distributed as follows: Education 93,1%; Arts 5,3% and Commerce 1,6%. Full-time students comprised 95,7% of the graduates and part-time 4,3%. Males comprised 62,0% of total and females 38,0%.

GRADUATION RATES ACCORDING TO FACULTY: Of the 4120 students enrolling in the first year 1533 (37,2%) graduated; 55,0% dropped out; and 7,7% were still studying (as at December 1980). Graduation rates according to Faculty were: Education 59,2%; Arts 42,4%; Commerce 33,0%; Science 26,1%; Law 12,4%. The graduation rate for degrees was 34,6% and for diplomas 53,9%.

NUMBER OF YEARS TAKEN BY GRADUATES TO PASS FIRST YEAR: 70,9% of the graduates took one year to pass first year; 26,4% two years; 2,8% more than 2 years. A large majority took one year to pass first year: 90,0% of Commerce graduates; 79,1% of Education; 68,4% of Law; 61,5% of Arts and 53,4% of Science.

NUMBER OF YEARS TAKEN BY GRADUATES TO PASS SECOND YEAR: The number of years were as follows:

3-year degrees: 70,9% took one year; 23,8% two years; and 5,2% more than two years.

4-year degrees: 42,8% took one year; 45,7% two years; and 11,6% more than two years.

Diplomas: 77,3% took one year; 20,4% two years; 2,3% more than two years.

NUMBER OF YEARS TAKEN BY DEGREE STUDENTS TO PASS MAJOR SUBJECTS: 42,2% of the students took the minimum time; 36,7% took minimum plus one year; 18,4% minimum plus two years; 2,7% minimum plus three years or more.

MAJOR SUBJECTS PASSED PER FACULTY:

Arts: Leading majors were English with 128 students, Psychology 103, History 98, Social Work 66, Geography 48, Sociology 42 and Philosophy 39. Majors in other subjects numbered fewer than 25.

Commerce: Leading majors were Accounting with 210 students, followed by Business Economics 191, and Economics 187. Others had totals below 11.

Education: Of the two subjects offered, Education had 113 students and Home Economics 1.

Law: Leading majors were Private Law and with 182 students, Roman Law 103 and Mercantile Law 21.

Science: The leading majors were Microbiology with 95 students, Physiology 93, Chemistry 57, Biochemistry 45, Mathematics 35, Pharmacy majors 35, Botany 34, Physics 20 and Zoology 19. Other subjects had numbers fewer than 15.

NUMBER OF YEARS BETWEEN PASSING MAJORS AND GRADUATING: 65,8% of those graduating did so in the same year that they passed their majors; 23,0% graduated one year after passing their majors; 6,4% graduated two years after passing majors and 4,7% graduated three or more years after passing their major subjects.

PERCENTAGE OF FIRST-YEAR INTAKE GRADUATING ACCORDING TO MINIMUM NUMBER OF YEARS TAKEN TO GRADUATE: Of the original 4120 students from the first year 14,1% graduated in minimum time,  
13,7% graduated in minimum time plus one year,  
6,6% graduated in minimum time plus two years and  
2,8% graduated in minimum time plus three or more years.

GRADUATES AND NUMBER OF YEARS TAKEN TO GRADUATE: 37,8% of the graduates took the minimum time; 36,9% took one year longer; 17,7% took two years longer; 7,6% took three or more years than the minimum time.

TIME TAKEN TO GRADUATE : DEGREE, DIPLOMA: Degree students took significantly longer to graduate than diploma students.

TIME TAKEN TO GRADUATE ACCORDING TO FACULTY: The percentage of students taking the minimum number of years to graduate according to Faculty were: Education 52,3%; Law 42,1%; Arts 38,3%; Commerce 28,5%; and Science 28,0%. Students at the other extreme, i.e., students taking three or more years than minimum were found in Commerce - 33,8%; Science 30,8% and Arts 24,2%.



## CHAPTER NINE

### DROP-OUTS FROM THE 1971-1976 FIRST-YEAR STUDENTS

This chapter analyses drop-outs from the University of Durban-Westville. These are students who left the university without obtaining the first degree or diploma for which they had enrolled. The analysis of drop-outs of the first-year enrolment of 1971-1976 is according to: year of drop-out; sex of student; full-time or part-time; Faculty. The number of courses passed by drop-outs is studied and a brief analysis is provided for students still studying.

#### 9.1. DISTRIBUTION OF DROP-OUTS FROM THE 1971-1976 FIRST-YEAR ENROLMENTS

Table 9.1 (p. 291) shows the distribution of drop-outs from the 1971-1976 first-year intake for each Faculty. Diploma and degree drop-outs are indicated separately. Male, female, full-time and part-time distributions are included.

The following observations and inferences relate to Table 9.1:

- (a) The drop-out rates for the 1971-1976 first-year students were
  - (i) 55,0% for all students,
  - (ii) 57,3% for degree students only, and
  - (iii) 40,6% for diploma students.
- (b) The incidence of drop-out was greater among degree students than among diploma students. A  $\chi^2$  test was applied to the distribution of drop-outs for degree and diploma students and a value of 55,2 was obtained ( $p < 0,001$ ). The difference in the drop-out rates between degree students and diploma students was highly significant.
- (c) The drop-out rate of 55,0% for the University of Durban-Westville for the period 1971-1976 is considerably higher than that reported

TABLE 9.1

DISTRIBUTION OF DROP-OUTS FROM THE 1971-1976 FIRST-YEAR INTAKE ACCORDING TO FACULTY : DEGREE, DIPLOMA, FULL-TIME PART-TIME, MALE AND FEMALE

Faculty	Degree or Diploma	Full-time		Part-time		Male		Female		Total No.	Percentage Drop-out
		No.	%	No.	%	No.	%	No.	%		
Arts	Degree	391	73,5	141	26,5	320	60,2	212	39,8	532	52,6
	Diploma	64	100	0	0	26	40,6	38	59,4	64	
	Total	455	76,3	141	23,7	346	58,1	250	41,9	596	
Commerce	Degree	471	90,2	51	9,8	442	84,7	80	15,3	522	56,2
	Diploma	56	100	0	0	47	83,9	9	16,1	56	
	Total	527	91,2	51	8,8	489	84,6	89	15,4	578	
Education	Degree	98	100	-	-	61	62,2	37	37,8	98	30,8
	Diploma	109	100	-	-	62	56,9	47	43,1	109	
	Total	207	100	-	-	123	59,4	84	40,6	207	
Law	Degree	116	100	-	-	96	82,8	20	17,2	116	75,8
Science	Degree	771	100	-	-	618	80,2	153	19,8	771	68,0
Total	Degree	1847	90,6	192	9,4	1537	75,4	502	24,6	2039	57,3
	Diploma	229	100	-	-	135	59,0	94	41,0	229	40,6
	Degree plus Diploma	2076	91,5	192	8,5	1672	73,7	596	26,3	2268	55,0

by Erens and Louw (1978, 52) for South African White residential universities - 33% for the period 1969-1975. A  $\chi^2$  was computed for the difference in the proportions of students dropping out at the University of Durban-Westville and the White residential universities and a value of 745,06 was obtained ( $p < 0,001$ ). The difference was therefore, highly significant.

- (d) While drop-out rates for universities in the United Kingdom and the United States of America cannot be compared directly with those in South Africa, they do however, make interesting comparisons. Bligh (1978, 81) reported an average 13,3% drop-out for United Kingdom universities for students who would normally have completed their studies in the minimum time. Astin (1975, 12) calculated a 30,2% drop-out at 358 colleges and universities in the United States of America for students who should have graduated in 4 years.
- (e) Of the full-time students at the University of Durban-Westville 54,3% dropped-out, compared with the 64,2% for part-time. A  $\chi^2$  was computed to test this difference for significance and a value of 10,94 ( $p < 0,001$ ) was obtained. The greater drop-out rate among part-time students was highly significant.
- (f) Of the original 2866 male students 1672 (58,3%) dropped-out compared with the females where 596 out of 1254 (47,5%) dropped out.  $\chi^2$  was computed to see if the difference between the proportions of males and females dropping out was significant or not. A  $\chi^2$  value of 41,20 ( $p < 0,001$ ) was obtained. A highly significant difference existed between the proportions of male and female drop-outs.



9.2 DISTRIBUTION OF DROP-OUTS ACCORDING TO FACULTY FOR EACH YEAR :  
1971-1976

Table 9.2 shows the distribution of drop-outs for each Faculty for each year from 1971 to 1976. Appendix 22, p. 418, contains detailed distributions of drop-outs for each Faculty for each year according to degrees, diplomas, male and female.

TABLE 9.2

PERCENTAGE DISTRIBUTION OF DROP-OUTS ACCORDING TO FACULTY PER YEAR:  
1971-1976

Faculty	Year and Percentage Drop-out							Total
	1971	1972	1973	1974	1975	1976	1971-1976	1971-1976
	%	%	%	%	%	%	%	
Arts	51,8	49,0	50,9	53,3	49,3	58,8	52,6	596
Commerce	41,7	49,7	57,1	56,7	62,6	61,5	56,2	578
Education	36,9	33,3	29,9	23,2	31,4	31,8	30,8	207
Law	75,0	62,5	83,3	75,8	90,0	68,3	75,8	116
Science	54,3	67,6	66,8	70,4	72,2	70,0	68,0	771
Total	47,9	52,3	56,1	55,2	57,8	57,3	55,0	2268
Number	219	335	381	366	402	565	2268	

Table 9.2 reveals the following:

- (a) All Faculties except Education showed a general increase in the percentage drop-outs over the period 1971-1976. The Faculty that had the greatest mean drop-out rate among its students was Law with 75,8%; followed by Science 68,0%; Commerce 56,2%; Arts 52,6% and Education 30,8%.

A  $\chi^2$  was computed for the distribution of drop-outs in Table 9.2 and a value of 87,33 ( $p < 0,001$ ) was obtained. The five Faculties differed significantly with regard to the proportions of students that dropped out from each Faculty.

- (b) The annual percentage drop-out increased from 47,9% in 1971 to 57,3% in 1976. This trend is opposite to that found by Erens and Louw (1978, 56) for White students in South African universities where the drop-out rate had decreased from 44% for the period 1955-1961 to 33% for the period 1969-1975.
- (c) The drop-outs at the University of Durban-Westville were analysed in terms of the sex of the students. A  $\chi^2$  was calculated for the distribution of the sexes among the drop-outs over the five Faculties for the period 1971 to 1976. A  $\chi^2$  value of 5,1 ( $p > 0,05$ ) was obtained. There was no significant difference between the proportions of male and female drop-outs amongst the five Faculties.

### 9.3. DROP-OUTS ACCORDING TO YEAR OF DROP OUT

The drop-outs were analysed to obtain the number that dropped out each year following initial enrolment. (See Appendix 23, p. 419). Of the 2268 drop-outs from the first-year intakes of 1971-1976:

- 1234 students (54,4%) dropped out in the first year,
- 573 students (25,3%) dropped out in the second year,
- 289 students (12,7%) dropped out in the third year,
- 124 students (5,5%) dropped out in the fourth year,
- 34 students (1,5%) dropped out in the fifth year,
- 6 students (0,3%) dropped out in the sixth year,
- and 8 students (0,4%) dropped out after the sixth year.

The above data illustrates that drop-out was heaviest in the first year and decreased by about 50% per year in succeeding years.

A further analysis was undertaken of degree drop-outs on a Faculty basis as shown in Table 9.3

TABLE 9.3

DROP-OUTS ACCORDING TO YEAR OF DROP-OUTS AND FACULTY : DEGREE STUDENTS

Faculty	Year of Drop-out										Total
	1st		2nd		3rd		4th		5th <sup>+</sup>		
	No.	%	No.	%	No.	%	No.	%	No.	%	
Arts	295	55,5	137	25,8	59	11,1	28	5,3	13	2,4	532
Commerce	237	45,4	131	25,1	100	19,2	38	7,3	16	3,1	522
Education	55	56,1	23	23,5	10	10,2	6	6,1	4	4,1	98
Law	33	28,4	43	37,1	28	24,1	8	6,9	4	3,4	116
Science	459	59,5	188	24,4	73	9,5	41	5,3	10	1,3	771
Total	1079	52,9	522	25,6	270	13,2	121	5,9	47	2,3	2039

The following observations and inferences are made from Table 9.3:

- (a) The drop-out of degree students was highest in the first year and decreased in succeeding years. The drop-out rates for the University were as follows:

1079 (52,9%) in the first year  
 522 (26,6%) in the second year,  
 270 (13,2%) in the third,  
 121 (5,9%) in the fourth, and  
 47 (2,3%) in the fifth and later years.



- (b) The above pattern of drop-out over successive years is displayed by the Faculties as well, with the exception of Law where a higher percentage (37,1%) of drop-outs occurred in the second year compared with the first-year drop-out of 8,4%.
- (c) Commerce had a greater percentage of students dropping out in the third and fourth years than the Faculties of Arts, Education and Science.

A graphical representation was made of the data in Table 9.2. See Figure 9.1 (p. 297). The conclusions drawn in respect of Law Faculty and Commerce Faculty are clearly visible.

- (d) A  $\chi^2$  was computed for the distribution in Table 9.3 to establish whether the differences in the distributions were significant or not. A  $\chi^2$  of 76,59 ( $p < 0,001$ ) was obtained. There were significant differences therefore, among Faculties in the distribution of degree drop-outs in the first, second, third and subsequent years at university. Science, for example, had 59,5% dropping out in the first year while Law had only 28,4% doing so. Law had 37,1% dropping out in the second year while Education had 23,5%.
- (e) A  $\chi^2$  was calculated for the distribution of diploma drop-outs. The value obtained was  $\chi^2 = 0,26$  ( $p > 0,05$ ). Therefore there were no significant differences in the distributions of drop-outs over the first, second, third and subsequent years of study among diploma students.

Appendix 23, p.419, shows the detailed analysis of drop-outs for each Faculty. Data are given not only for the year in which the student dropped out, but also for the semester of that year. Further the second semester drop-outs were separated into two groups, i.e., drop-outs before the Duly Performed Certificates (DP's) were announced, and drop-outs after the D.P. announcements or the final examination.

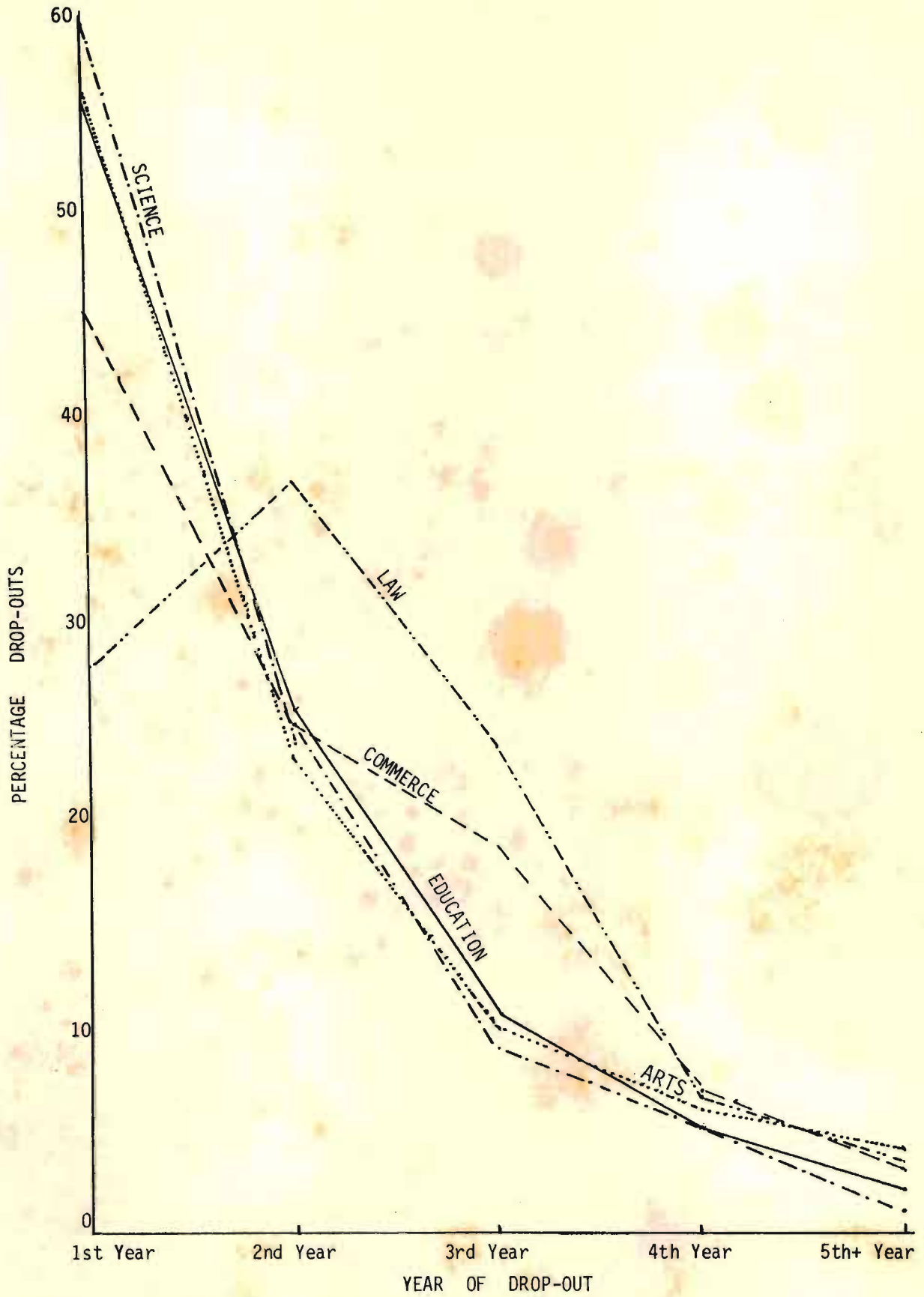


Fig. 9.1 PERCENTAGE DROP-OUT PER FACULTY ACCORDING TO YEAR OF DROP-OUT

These drop-outs were categorised as:

- (a) first year, first semester;
- (b) first year, second semester before Xdp announcements were made;
- (c) first year, second semester after Xdp announcements or the annual examinations;
- (d) second year, first semester;
- (e) second year, second semester before Xdp announcements;
- (f) second year, second semester after Xdp announcements or annual examinations;
- (g) third year, first semester;
- .....
- .....
- .....
- (p) sixth year, first semester;
- (q) sixth year, second semester before Xdp announcements;
- (r) sixth year, second semester after Xdp announcements or annual examinations;
- (s) sixth year plus (later than 6th year).

The drop-out data in Appendix 23 are illustrated graphically in Figures 9.2 - 9.6 for each Faculty for degree students. For each year three blocks are indicated. The first block is for the first semester drop-out; the second for the second semester drop-out before Xdp announcements; the third for the second semester drop-out after Xdp announcements or the annual examinations.



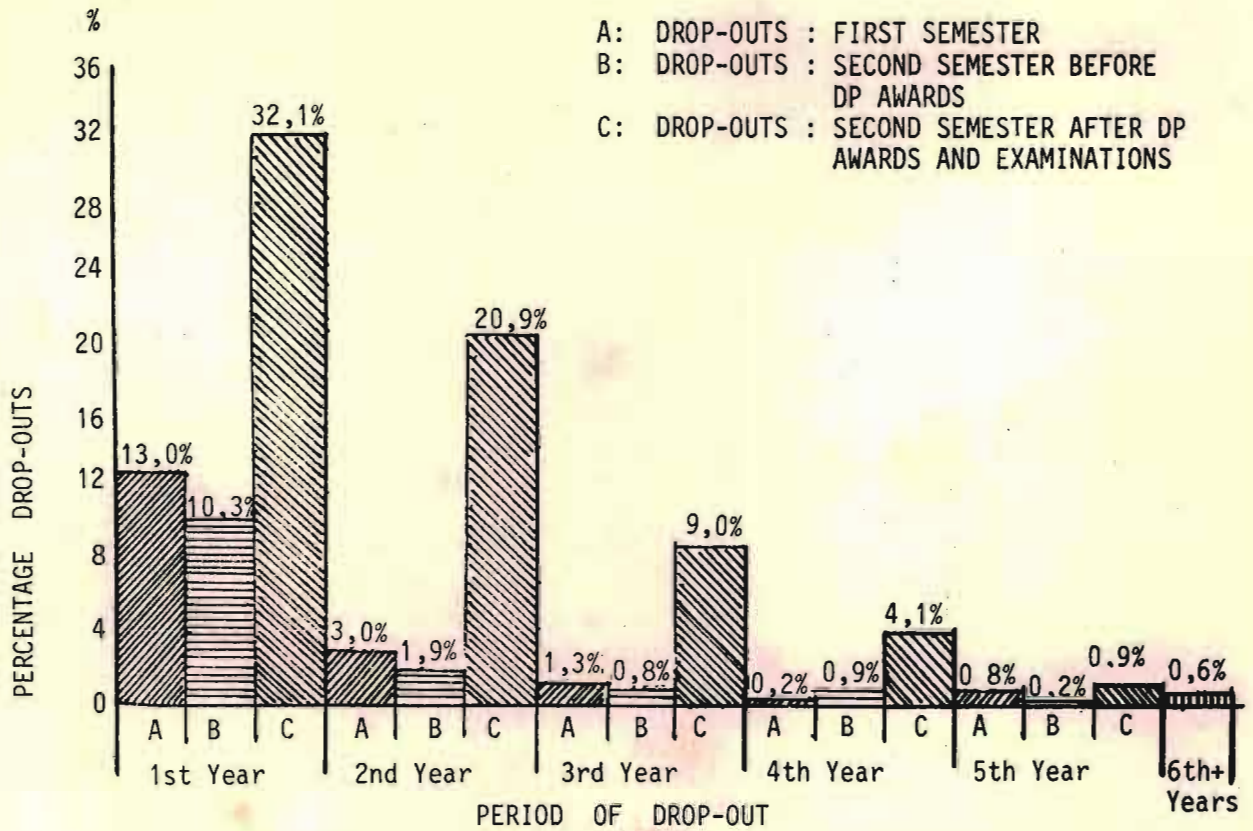


Fig. 9.2 PERCENTAGE DROP-OUT ACCORDING TO SEMESTER AND YEAR FOR DEGREE STUDENTS IN THE ARTS FACULTY

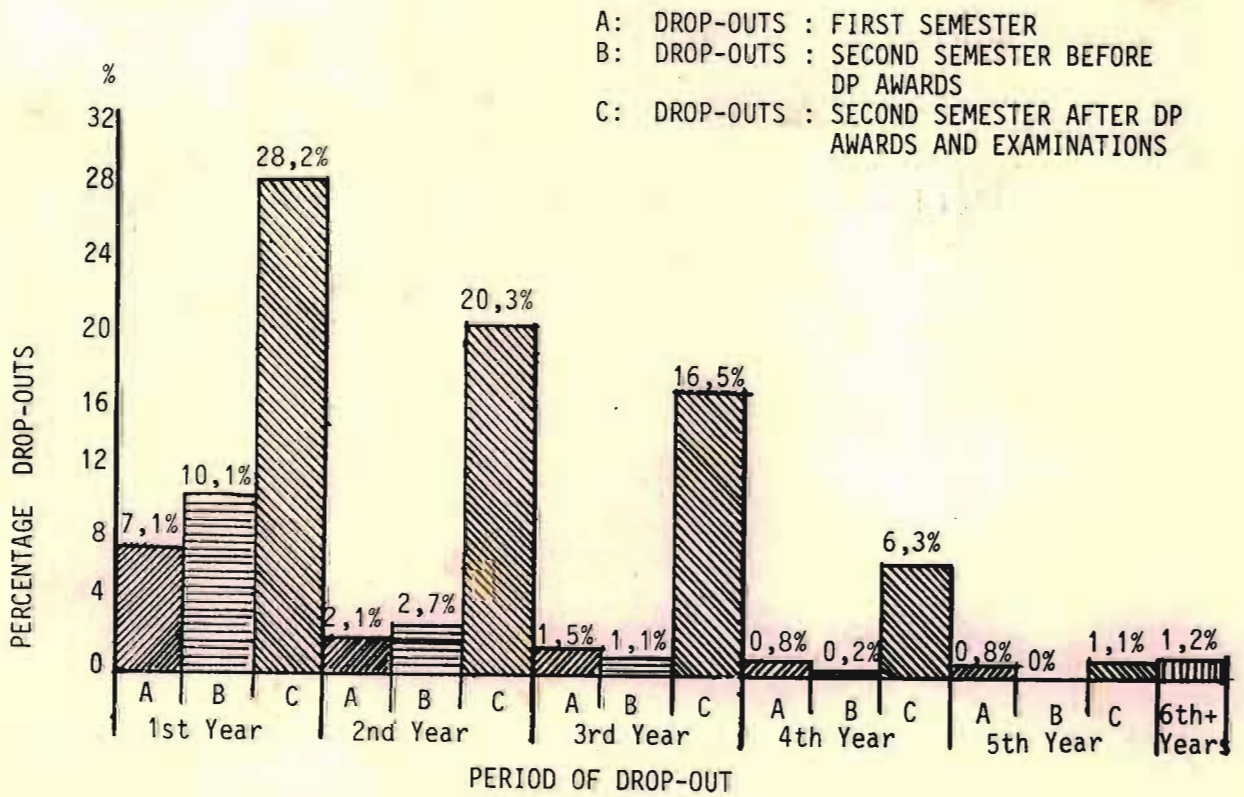


Fig. 9.3 PERCENTAGE DROP-OUT ACCORDING TO SEMESTER AND YEAR FOR DEGREE STUDENTS IN THE COMMERCE FACULTY

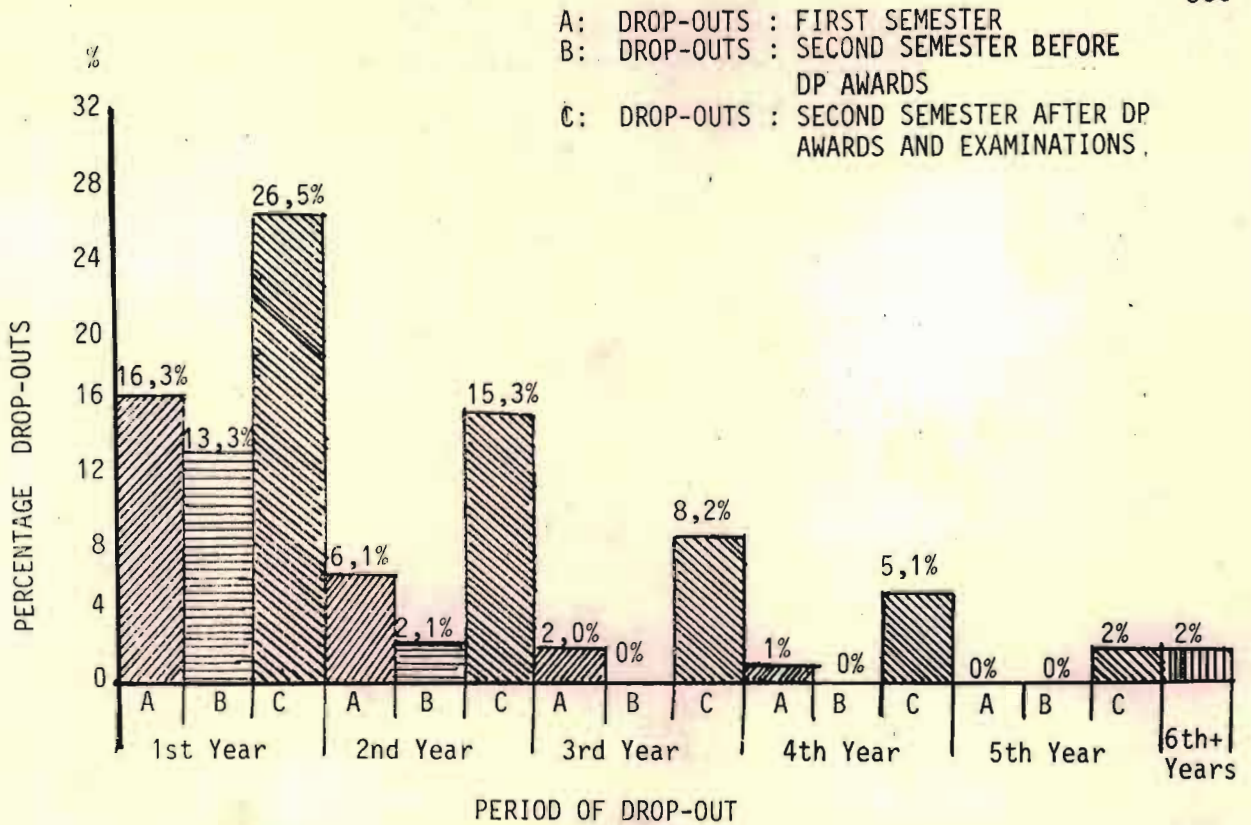


Fig. 9.4 PERCENTAGE DROP-OUT ACCORDING TO SEMESTER AND YEAR FOR DEGREE STUDENTS IN THE EDUCATION FACULTY

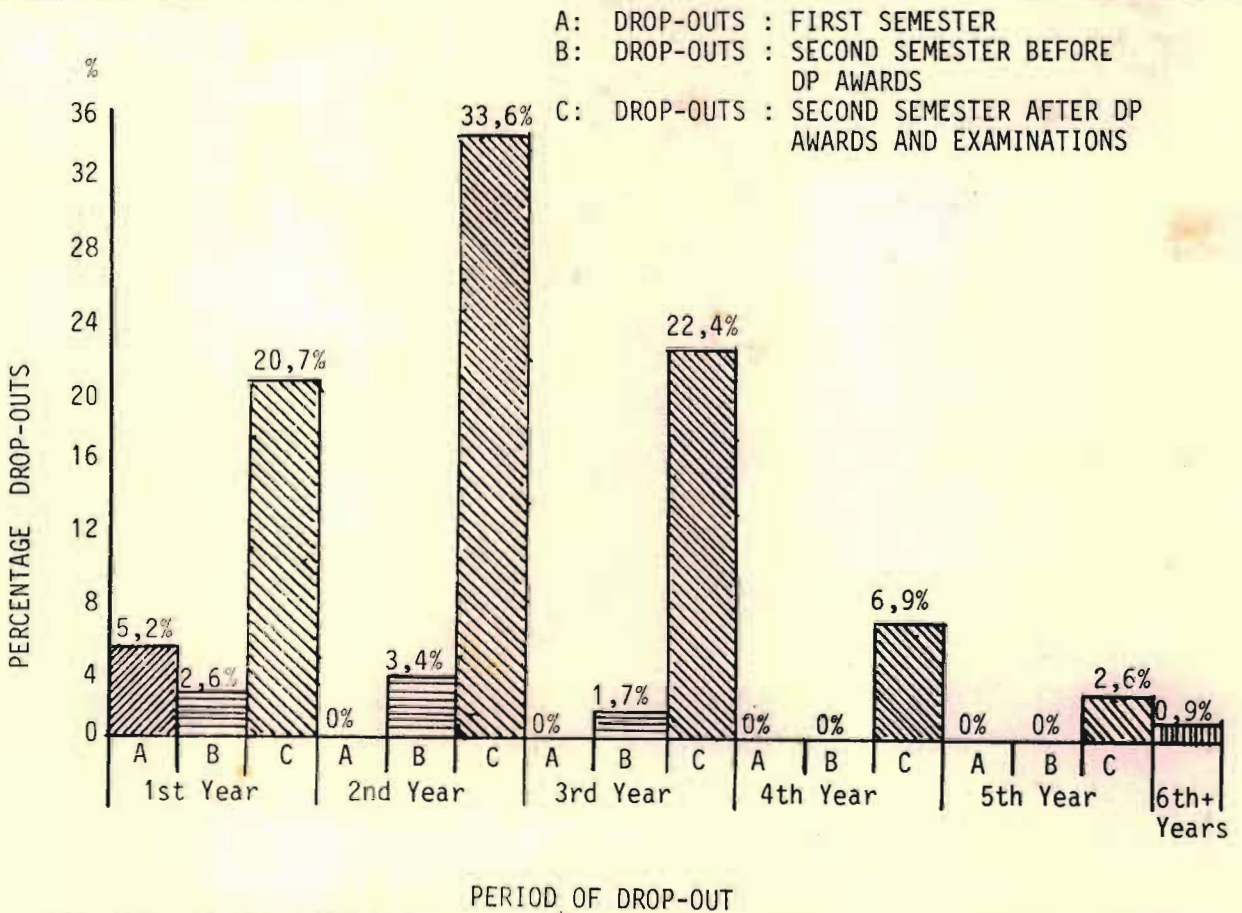


Fig. 9.5 PERCENTAGE DROP-OUT ACCORDING TO SEMESTER AND YEAR FOR DEGREE STUDENTS IN THE LAW FACULTY



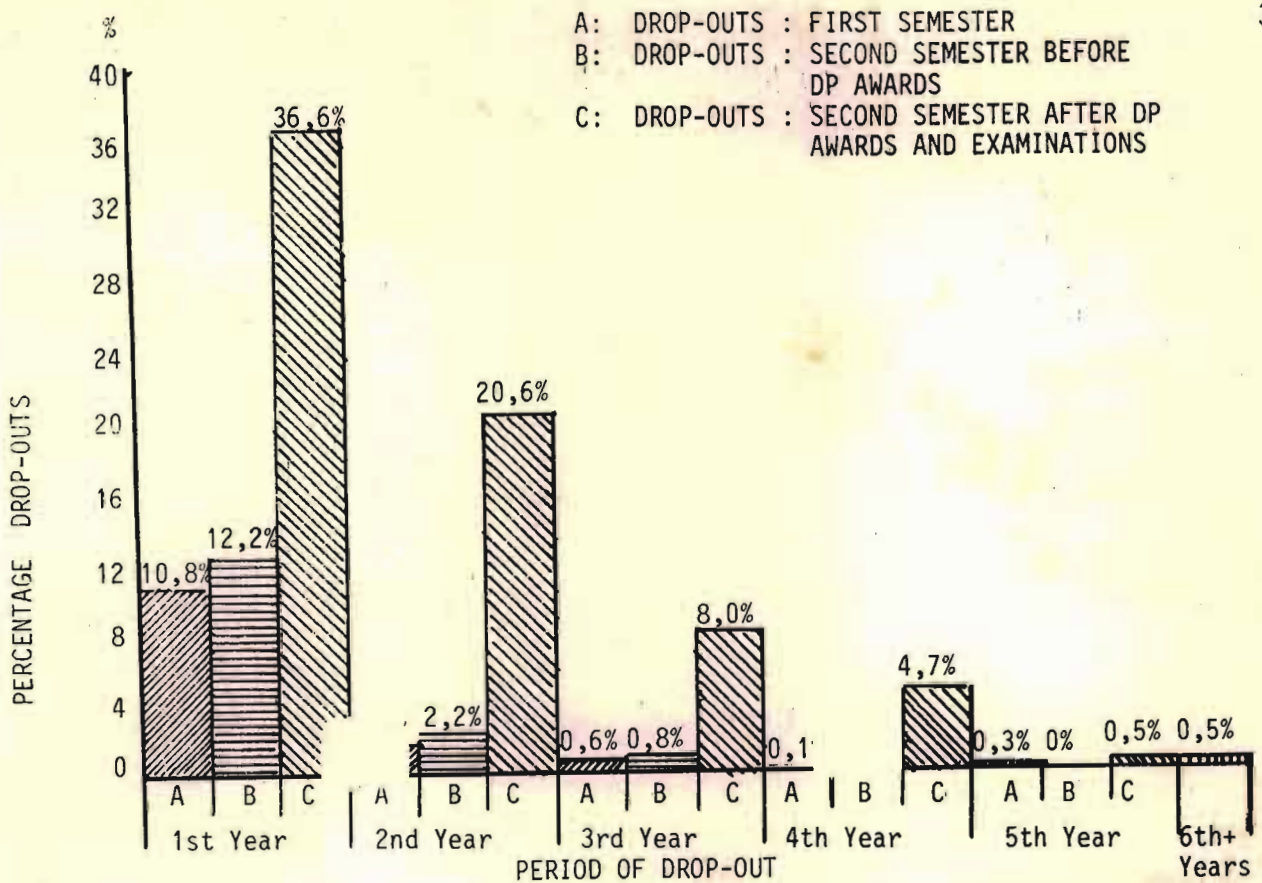


Fig. 9.6 PERCENTAGE DROP-OUT ACCORDING TO SEMESTER AND YEAR FOR DEGREE STUDENTS IN THE SCIENCE FACULTY

A study of the Figures 9.2 - 9.6 reveals that:

- (a) The Faculties of Arts, Commerce and Science displayed the same pattern:
  - (i) Drop-out was highest in the first year and it decreased gradually in succeeding years.
  - (ii) In each year drop-out occurred practically throughout the year but drop-out was highest in the third period of each year, i.e., after the Duly Performed Certificates had been posted or examinations had been written.
- (b) Drop-out was relatively low in the Faculty of Education while in the Law Faculty, drop-out was higher at the end of the second year than at the end of the first.

#### 9.4. DROP-OUT AND FAILURE AS FINANCIAL WASTAGE

Drop-out and failure result in wastage of human and material resources.



One of these is financial loss. This monetary wastage is borne not only by the student and his parents but also by the Public or the State. The provision of university education is an expensive undertaking. The data in Table 9.4 show the expenditure of the University of Durban-Westville as well as the cost per student, per year, for the period 1971-1981. While the students in the study were from the 1971-1976 first-year intake, the analysis of financial expenditures was taken beyond 1976 to 1978, because many of the students in this study were on campus even after 1976.

TABLE 9.4

EXPENDITURE AND COST PER STUDENT AT THE UNIVERSITY OF DURBAN-WESTVILLE FOR 1971-1978

Year	University Expenditure	Cost Per Student	Enrolment
1970/1971	R1 697 802	R1 064	1710
1971/1972	R2 366 330	R1 007	2003
1972/1973	R3 369 364	R1 147	2192
1973/1974	R4 041 704	R1 319	2342
1974/1975	R4 920 637	R1 419	2674
1975/1976	R5 981 636	R1 427	3124
1976/1977	R6 733 712	R1 295	3522
1977/1978	R6 894 082	R1 328	4201
$\bar{x}$		R1 250	

Sources: Department of Indian Affairs Reports : 1971-1980.  
Department of Internal Affairs Report : 1982

Table 9.4 reveals the following facts:

- (a) The university expenditure increased as the student enrolment increased.
- (b) The cost per student showed a smaller rate of increase than that of expenditure.
- (c) The average cost per student for the period 1971-1978 was R1 250.

The annual expenditure for the university was partly off-set by revenue from registrations and tuition fees which amounted to less 10% of the total expenditure for every year except 1973 when the amount exceeded 10%.

Therefore a drop-out of 2268 students, i.e., 55,0% of the initial enrolment, resulted in an appreciable loss of money when the cost of university education per student was taken into account. It is imperative therefore, that the factors contributing to the heavy drop-out be identified as soon as possible so that measures could be taken to reduce the extent of this problem.

The drop-out debacle described thus far at the University of Durban-Westville is depressing. However, one item of consolation is that not all drop-outs left with nothing to show for their stay at the university. A number of drop-outs acquired one or more credits, i.e., courses passed. This positive aspect of the drop-out is analysed in the next section.

#### 9.5. NUMBER OF COURSES PASSED BY DROP-OUTS

Of the 2268 students who dropped out of university 510 left in the first year before the DP announcements were made. Therefore altogether 1758 students (77,5% of the drop-outs) were influenced by DP's and/or written examinations, at the end of the first year or in subsequent years.

An analysis was made of the academic records of drop-outs and the number of courses passed by them. Table 9.5. (p. 304) shows the number of courses passed by drop-outs in the first, second, third and subsequent years. (A more detailed account showing distributions for male, female and total is contained in Appendix 24, p. 424 ).

TABLE 9.5

## ACHIEVEMENTS OF DROP-OUTS IN FIRST AND SUBSEQUENT YEARS

Drop-out Group	Number of Students Passing								Total
	0 courses	1 course	2 courses	3 courses	4 courses	5 courses	6 courses	7 <sup>+</sup> courses	
1st year	665	190	137	78	127	25	12	0	1234
2nd year	67	69	98	85	76	74	32	72	573
3rd year	14	17	13	34	44	49	35	83	289
4th year	6	1	2	8	8	20	17	62	124
5th year	1	0	2	1	1	6	3	20	34
6th year	0	0	0	0	0	0	1	5	6
7th <sup>+</sup> year	0	0	0	0	0	0	0	8	8

The following observations are made from Table 9.5:

(a) Of the 2268 drop-outs

753 (33,2%) left with no credits;

529 (23,3%) left with 1 or 2 credits, i.e., courses passed;

206 (9,1%) dropped out with 3 credits;

256 (11,3%) dropped out with 4 credits;

174 (7,7%) dropped out with 5 credits;

100 (4,4%) dropped out with 6 credits; and

and 250 (11,0%) dropped out with 7 or more credits.

(b) A total of 986 students (43,5%) dropped out with 3 or more credits, the usual number required to pass first year for degree students in most Faculties.

(c) A total of 250 students (11,0%) dropped out with 7 or more courses.

This number is half or more than the total required to complete most



degrees.

- (d) The very poor performance of certain students is alarming. A total of 88 students (3,9%) spent between two and five years at University but failed all courses. Another total of 87 students (3,8%) spent a similar period and obtained one credit only, while 115 students (5,1%) spent a similar period and obtained two credits only. This is considerable wastage which needs to be prevented.

Table 9.6 (p. 306 ) shows the percentage distribution of the courses passed by drop-outs from each Faculty. Students who dropped out in the first year before the Xdps were granted, are included. (In Appendix 25, p. 425 the number of courses passed are given for males, females and total for each Faculty).

The following observations and inferences relate to Table 9.6:

- (a) In the Law Faculty 39 students (33,6%) dropped out with 7 or more credits.
- (b) Both the number of years of study before drop-out and the number of courses passed were greater in the Faculty of Commerce than in Arts or Science.
- (c) A  $\chi^2$  was calculated for the distribution in Table 9.6 and a value of 231,08 ( $p < 0,001$ ) was obtained. There were significant differences, therefore, in the distribution of credits of drop-outs among the various Faculties.
- (d) In order to reduce the effect of the relatively small numbers in the Faculties of Law and Education, a  $\chi^2$  was computed for the 3 larger Faculties, namely, Arts, Commerce and Science. A  $\chi^2$  value of 12,84 ( $p > 0,05$ ) was obtained. The inference that emerged was that the differences in distributions of credits in the three Faculties were not

TABLE 9.6

NUMBER OF COURSES PASSED BY DROP-OUTS IN EACH FACULTY : 1971-1976

Faculty	Percentage of Drop-outs Passing								Total
	0 courses	1 course	2 courses	3 courses	4 courses	5 courses	6 courses	7 <sup>+</sup> courses	
	%	%	%	%	%	%	%	%	No.
Arts	37,2	13,4	11,1	10,2	6,2	8,2	2,7	10,9	596
Commerce	22,8	13,0	14,5	10,0	8,5	10,6	6,2	14,4	578
Education	45,4	9,2	8,2	6,8	10,1	6,3	5,3	8,7	207
Law	11,2	9,5	9,5	12,9	6,9	10,3	6,0	33,6	116
Science	37,9	11,9	9,6	7,5	18,3	5,1	3,9	5,8	771
Total	33,2	12,2	11,1	9,1	11,3	7,7	4,4	11,0	2268
Male	32,8	12,2	11,2	9,3	12,0	7,7	4,2	10,6	1672
Female	34,4	12,2	10,7	8,6	9,4	7,6	4,9	12,2	596
Total (Number)	753	277	252	206	256	174	100	290	2268

significant. The achievement patterns of drop-outs in these three Faculties did not vary significantly.

- (e) In order to establish whether there were significant differences in the distributions of credits obtained in terms of the student's sex, a  $\chi^2$  was calculated and a value of 13,33 ( $p > 0,05$ ) was obtained. Therefore, there was no significant difference between the sexes in the distribution of drop-outs with no credits, 1 credit, 2 credits, or more than 2 credits.

Whereas in the previous chapter an analysis was made of those students from the 1971-1976 first-year admissions who eventually graduated, in this chapter a study is made of the drop-outs. Before a comparison is made of the data on graduates and drop-outs in order to identify predictors of graduation and drop-out - this is undertaken in the next chapter - a brief summary is provided of those students who were still studying (as at December, 1980).

#### 9.6. STUDENTS OF THE 1971-1976 FIRST-YEAR ADMISSIONS WHO WERE STILL STUDYING

Of the 4120 students whose enrolment at the University of Durban-Westville during 1971-1976 was their first for post-matriculation study

- (a) 1533 (37,2%) completed their degrees or diplomas,
- (b) 2268 (55,0%) dropped out and
- (c) 319 (7,7%) were still studying (as at December, 1980).

Table 9.7 (p. 308) shows the distribution of the 319 students who were still studying.

Table 9.7 reveals that:

- (a) Nearly half the students still studying (47,6%) were from the 1976 first-year enrolment.



TABLE 9.7

STUDENTS FROM THE 1971-1976 FIRST-YEAR ADMISSIONS, STILL STUDYING IN 1980

Faculty	1971	1972	1973	1974	1975	1976	Total	% of Total Enrolment
Arts	6	6	4	2	15	24	57	5,0
Commerce	2	2	10	16	25	56	111	10,8
Education	0	0	3	12	19	33	67	10,0
Law	0	0	1	2	1	14	18	11,8
Science	1	1	3	12	24	25	66	5,8
Total	9	9	21	44	84	152	319	7,7
%	2,8	2,8	6,6	13,8	26,3	47,6	100	

- (b) The percentages of students still studying in the Faculties of Commerce, Education and Law were about double those in Arts and Science.
- (c) A few students had been studying for 10 years without obtaining the first degree.

### 9.7 SUMMARY

DISTRIBUTION OF DROP-OUTS: Of the 4120 students comprising the 1971-1976 first-year admissions 55% dropped out. The drop-out among degree students was 57,3% and among diploma 40,6%; and the difference was highly significant. The drop-out rate of 55,0% at the University of Durban-Westville is significantly higher than the 33% for the White universities in South Africa for the period 1969-1975. The drop-out rate among part-time students (64,2%) was significantly higher than that of full-time students (54,3%). The male drop-out of 58,3% was significantly higher than the



female rate of 47.5%.

DISTRIBUTION OF DROP-OUTS ACCORDING TO FACULTY: The highest drop-out rate was in the Law Faculty - 75,8%; followed by Science 68%; Commerce 56,2%; Arts 52,6% and Education 30,8%. The differences between the drop-out rates of the various Faculties were significant. All Faculties except Education, showed a general increase in the drop-out rate over the period 1971-1976. The annual drop-out rate increased from 47,9% in 1971 to 57,3% in 1976. This trend was opposite to that at White universities where the drop-out rate decreased from 44% for the period 1955-1961 to 33% for the period 1969-1975.

DROP-OUT ACCORDING TO YEAR OF DROP-OUT: Of the 2268 students who dropped out out: 52,9% dropped out in the first year; 25,6% in the second; 13,2% in the third; 5,9% in the fourth; 2,3% in the fifth. Drop-out was highest in the first year, decreasing in succeeding years in all Faculties except Law where drop-out was highest in the second year. The Faculties of Law and Commerce had a greater percentage of delayed drop-outs than other Faculties.

DROP-OUT AS A FINANCIAL WASTAGE: The expenditure for the University of Durban-Westville increased from R1 697 802 for the financial year 1970/1971 to R6 894 082 for 1977/1978. The cost per student rose from R1 064 for 1970/1971 to R1 328 for 1977/1978 averaging R1 250 per student. A drop-out of 2268 students contributed to a substantial financial loss.

NUMBER OF COURSES PASSED BY DROP-OUTS: Of the 2268 students who dropped out during 1971-1976, 33,2% obtained no credits, 23,3% obtained 1 or 2 credits; 9,1% 3 credits; 11,3% 4 credits; 7,7% 5 credits; 4,4% 6 credits; and 11% 7 or more credits. Of the students dropping out 986 (43,5%) dropped out with 3 credits which is equivalent to a first-year pass in most Faculties, while 250 (11,0%) dropped out with 7 or more credits which is at least

half the number of courses required to pass most degrees.

STUDENTS STILL STUDYING: Of the 4120 first-year intake 1533 (37,2%) graduated; 2268 (55,0%) dropped out; while 319 (7,7%) were still studying as at December 1980. Of the 319 students still studying 47,6% were from the 1976 intake. The distribution of these 319 students according to Faculty were: Arts 57, Commerce 111, Education 67, Law 18 and Science 66.



## CHAPTER TEN

### FACTORS PREDICTING GRADUATION OR DROP-OUT FROM UNIVERSITY

This chapter compares the graduates (discussed in Chapter 8) and drop-outs (discussed in Chapter 9) from the 1971-1976 first-year students selected for this study. The predictive capacity of institutional and student factors for graduation and drop-out is investigated. These factors are degree or diploma enrolment, Faculty of study, full-time or part-time study, sex of student, home province, commuter distance, home language, chronological age, matriculation status, matriculation aggregate, matriculation subjects and symbols, number of courses attempted in first year, number of courses failed, duly performed certificates refused (Xdps).

Many of these factors have been tested in Chapter 7 for their capacity to predict students passing or failing in the first year at university.

#### 10.1 DISTRIBUTION OF GRADUATES AND DROP-OUTS

From the 4120 first-year students for the period 1971-1976 selected for this study, the distribution of graduates and drop-outs as in December 1980 was as shown below:

Number of graduates:	1533 (37,2%)
Number of drop-outs:	2268 (55,0%)
Number still studying:	319 (7,7%)

The distribution of graduates and of drop-outs from the new enrolment of 1971-1976 is shown in Table 10.1 (p. 312).

(More detailed distributions of graduates and drop-outs appear in Appendices 26 (p. 426) and 27 (p. 427) respectively).

TABLE 10.1

DISTRIBUTION OF GRADUATES AND DROP-OUTS FROM THE 1971-1976 FIRST-YEAR STUDENTS ACCORDING TO FACULTY, DEGREE OR DIPLOMA, MALE OR FEMALE, FULL-TIME OR PART-TIME

Faculty	Degree or Diploma	Graduates					Drop-outs				
		Total	Full-Time	Part-Time	Male	Female	Total	Full-Time	Part-Time	Male	Female
Arts	Degree	464	401	63	217	247	532	391	141	320	212
	Diploma	16	16	0	10	6	64	64	0	26	38
	Total	480	417	63	227	253	596	455	141	346	250
Commerce	Degree	335	332	3	296	39	522	471	51	442	80
	Diploma	5	5	-	4	1	56	56	0	47	9
	Total	340	337	3	300	40	578	527	51	489	89
Education	Degree	115	115	-	52	63	98	98	-	61	37
	Diploma	283	283	-	142	141	109	109	-	62	47
	Total	398	398	-	194	204	207	207	-	123	84
Law	Degree	19	19	-	15	4	116	116	-	96	20
Science	Degree	296	296	-	215	81	771	771	-	618	153
Total	Degree	1229	1163	66	795	434	2039	1847	192	1537	502
Total	Diploma	304	304	0	156	148	229	229	0	135	94
Total	Degree and Diploma	1533	1467	66	951	582	2268	2076	192	1672	596



The data in Table 10.1 provide a graduation-drop-out dichotomy for correlation with predictors, so that factors that influence graduation or drop-out can be discovered.

The following deductions are made from Table 10.1:

- (a) In every Faculty except Education, the number of drop-outs exceeded the number of graduates for degrees and diplomas. Figure 10.1 shows this graphically:

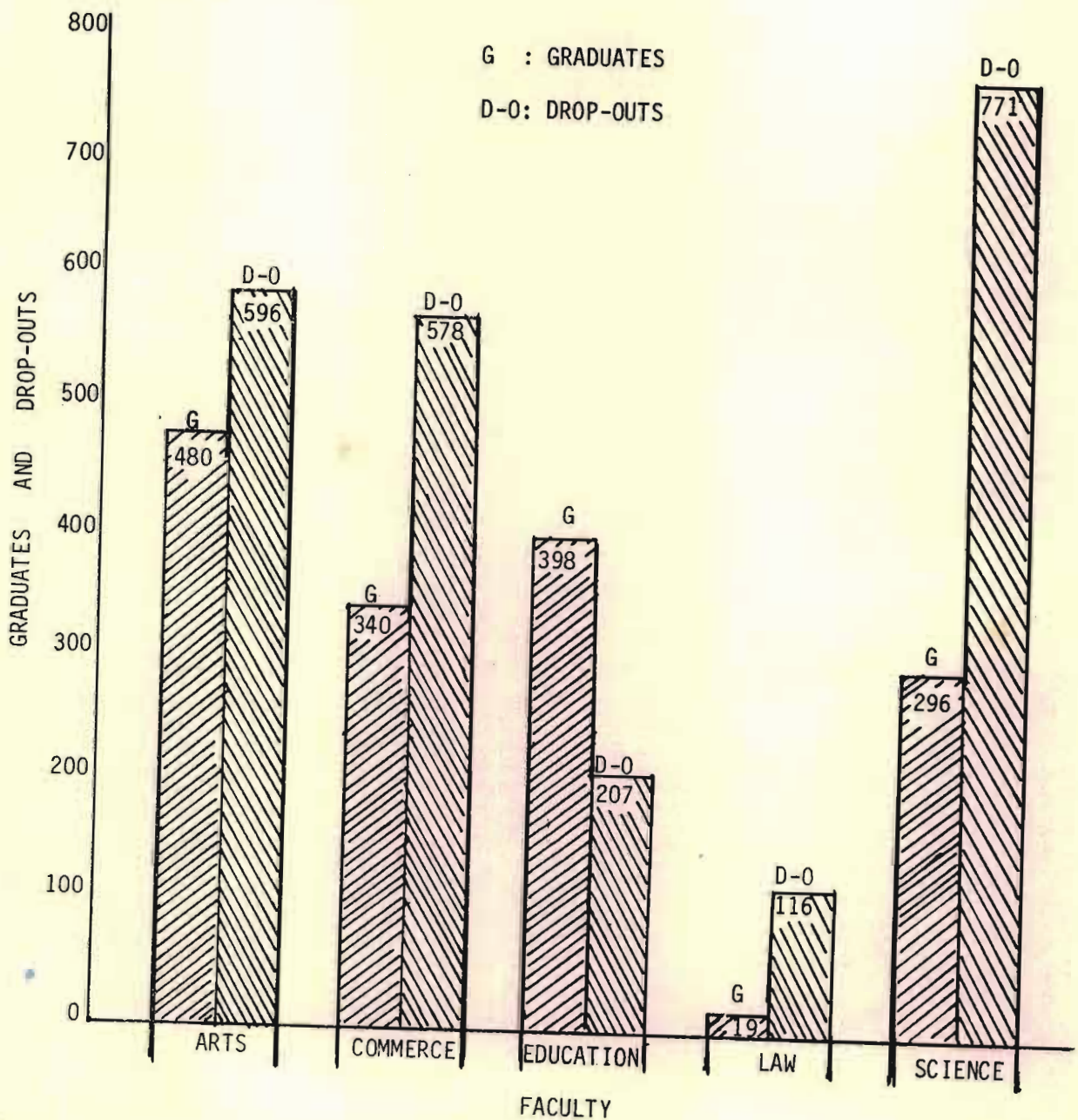


Fig. 10.1 GRADUATES AND DROP-OUTS ACCORDING TO FACULTY: 1971-1976



The large numbers of students dropping out from the Science Faculty, in particular, followed by those in Arts and Commerce are clearly seen in figure 10.1; although the fact that the Law Faculty has the highest drop-out rate may not be obvious.

- (b) In the Faculty of Education the number of degree and diploma graduates exceeded that of the drop-outs.
- (c) Of the total number of students who had registered for degrees, the number of drop-outs (2039) exceeded that of those who graduated (1229).
- (d) For total diplomas, however, graduates (314) exceeded drop-outs (229).
- (e) For total degrees and diplomas, drop-outs (2268) exceeded graduates (1533).
- (f) Of the 3801 students of the first-year intakes of 1971-1976 who had either graduated or dropped out, 1533 (40,3%) had graduated while 2268 (59,7%) had dropped out.

## 10.2 FACTORS THAT PREDICT GRADUATION OR DROP-OUT FROM UNIVERSITY

### 10.2.1. Graduation and Drop-out among Degree Students and Diploma Students

Table 10.2 (p. 315) shows the distribution of graduates and drop-outs according to Faculty.

The following observations and inferences emerge from Table 10.2:

- (a) (i) Among degree students 37,6% graduated, while 62,4% dropped out.
- (ii) Among diploma students 57,0% graduated while 43,0% dropped out.
- (iii) A  $\chi^2$  was computed to test the significance of the above difference between degree and diploma.  $\chi^2 = 71,89$  ( $p < 0,001$ ). Therefore, of those who graduated the proportion of diploma students was significantly higher than the proportion of degree students.

TABLE 10.2

DISTRIBUTION OF GRADUATES AND DROP-OUTS ACCORDING TO FACULTY

Faculty	Degree				Diploma			
	Graduates		Drop-outs		Graduates		Drop-outs	
	No.	%	No.	%	No.	%	No.	%
Arts	464	46,6	532	53,4	16	20,0	64	80,0
Commerce	335	39,1	522	60,9	5	8,2	56	91,8
Education	115	54,0	98	46,0	283	72,2	109	27,8
Law	19	14,1	116	85,9	-	-	-	-
Science	296	27,7	771	72,3	-	-	-	-
Total	1229	37,6	2039	62,4	304	57,0	229	43,0

These graduation results are similar to those for first-years where, in the first-year examinations (Chapter 7), diploma students performed significantly better than degree students.

- (b) (i) Of the degree students who graduated the success rates per Faculty were:

Education	50,0%
Arts	46,6%
Commerce	39,1%
Science	27,7%
Law	14,1%.

- (ii) A  $\chi^2$  was computed for the distribution over Faculties of graduates and drop-outs for degree students and a value of 67,07 ( $p < 0,001$ ), was obtained. For degree students the differences in the proportions of students graduating and students dropping out in the different Faculties were highly significant.

- (c) (i) While the diploma data show that the average of 57,0% graduated, the situation is one of extremes. The graduation rates per Faculty were as follows:

Education	72,2%
Arts	20,5%
Commerce	8,2%.

- (ii) A  $\chi^2$  was computed for the distribution of graduates and drop-outs for diplomas and a value of 132,51 ( $p < 0,001$ ) was obtained. The differences in the proportions of graduates and drop-outs among diploma students in the three Faculties were highly significant.

#### 10.2.2. Graduation and Drop-out among Faculties: Degrees

The analysis was made of graduates and drop-outs among degree students,



where each Faculty was compared with every one of the others.  $\chi^2$  was computed for each pair of Faculties. Table 10.3 shows the  $\chi^2$  values.

TABLE 10.3

$\chi^2$  FOR PROPORTIONS OF GRADUATES AND DROP-OUTS AMONG FACULTIES : DEGREES

Faculty	$\chi^2/p$	Arts	Commerce	Education	Law	Science
Arts	$\chi^2$ p	- -	10,55 p < 0,01	3,85 p < 0,05	51,36 p < 0,001	78,62 p < 0,001
Commerce	$\chi^2$ p	- -	- -	27,02 p < 0,001	31,80 p < 0,001	27,77 p < 0,001
Education	$\chi^2$ p	- -	- -	- -	55,60 p < 0,001	56,12 p < 0,001
Law	$\chi^2$ p	- -	- -	- -	- -	11,58 p < 0,001
Science	$\chi^2$ p	- -	- -	- -	- -	- -

The interpretations of  $\chi^2$  and p in Table 10.3 are as follows: :

- (a) All  $\chi^2$  values were significant at the 5% (p < 0,05), 1% (p < 0,01) or 0,1% (p < 0,001) level.
- (b) Taking each Faculty in the order in which it appears in the first column in Table 10.3, we have the following:
  - (i) The Arts Faculty was significantly more successful than Law and Science in producing graduates (p < 0,001). It was also

significantly more successful than Commerce ( $p < 0,01$ ) but significantly less successful than Education ( $p < 0,05$ ).

- (ii) The Commerce Faculty was significantly more successful ( $p < 0,001$ ) in preparing its students for graduation than the Science and Law Faculties, but significantly less successful ( $p < 0,001$ ) than the Education Faculty.
- (iii) The Education Faculty was significantly more successful than Law and Science ( $p < 0,001$ ) and Arts ( $p < 0,05$ ).
- (iv) Science was significantly more successful than Law ( $p < 0,001$ ).
- (v) To summarise:

For degrees the following holds: The Faculty of Education is significantly more successful than the Faculty of Arts, which is significantly more successful than the Faculty of Commerce, which is significantly more successful than Science, which is significantly more successful than Law.

Significant differences were found among Faculties regarding first-year pass rates of students (Chapter 7). However, the Commerce Faculty which had the best first-year pass rate, had a graduation rate that is lower than Education and Arts.

### 10.2.3. Full-time Students and Part-time Students, and Graduation or Drop-out

Only the Faculties of Arts and Commerce offered part-time courses for first-year students enrolling for a degree. Therefore, a comparison of graduates and drop-outs between full-time and part-time degree students was restricted to these two Faculties. A  $\chi^2$  was computed and a value of 37,59 ( $p < 0,001$ ) was obtained. The difference between the proportions of full-time students graduating (46,0%) and dropping out (54,0%), and part-time students graduating (25,6%) and dropping out (74,4%), was highly significant. Full-time students were significantly more successful than part-time students. The above results

are similar to those found in the first-year examinations (Chapter 7) where full-time students were significantly more successful than part-time.

#### 10.2.4. Sex of Students and Graduation or Drop-out

##### 10.2.4.1. Degrees and Diplomas; and Sex of Students

Male-female distributions of graduates and drop-outs (Table 10.1; p. 312) were compared for degrees and diplomas.  $\chi^2$  tests were applied.

- (a) For degree student  $\chi^2$  for the male and female distribution was 45,53 ( $p < 0,001$ ). Therefore, the difference between the proportions of female students graduating (46,4%) and dropping out (53,69%), and male students graduating (34,1%) and dropping out (65,9%), was highly significant. Significantly more women graduated than men.

The above result differs from that for first-year students (Chapter 7) where no significant difference was found between the examination results of males and females.

- (b) For diploma students the  $\chi^2$  value was 3,07 ( $p > 0,05$ ). There was no significant difference between the proportions of male students graduating (53,6%) and dropping out, and female students graduating (61,2%) and dropping out. Female students were more successful but not significantly so.

##### 10.2.4.2. Faculty and Sex of Student

An analysis of graduation and drop-out data of degree male students and female students was made in each Faculty.  $\chi^2$  was computed for each. Table 10.4 (p. 320) shows this distribution.



TABLE 10.4

$\chi^2$  FOR MALE-FEMALE DISTRIBUTION OF GRADUATES AND DROP-OUTS AMONG DEGREE STUDENTS IN EACH FACULTY

Faculty	Arts	Commerce	Education	Law	Science
$\chi^2$	18,44	2,32	6,16	0,01	7,07
Significance	$p < 0,001$	$p > 0,05$	$p < 0,05$	$p > 0,05$	$p < 0,01$

The following inferences are drawn from Table 10.4:

- (a) Arts: A significantly higher proportion of females than males graduated ( $p < 0,001$ ).
- (b) Education: A significantly greater proportion of females than males graduated ( $p < 0,05$ ).
- (c) Science: A significantly greater proportion of females than males graduated ( $p < 0,01$ ).
- (d) Commerce and Law: No significant difference existed between the sexes ( $p > 0,05$ ).

Therefore, the sex of the student was a significant factor in graduating or dropping out in the Faculties of Arts, Science and Education but not in the Faculties of Commerce and Law.

In the first-year examinations the sex of student was significant for the Arts Faculty only, with females performing better than males (Chapter 7).

#### 10.2.5. Province of Matriculation and Graduation or Drop-out

Table 10.5 (p. 321) shows the distribution of graduates and drop-outs according to Province of Matriculation for the period 1971 to 1976. Data are given for the total student population, males and females. The "others"

category comprises students who studied privately, by correspondence or at overseas institutions.

(A more detailed distribution according to Faculty, degree, diploma and sex of student, is contained in Appendix 28, p. 428).

TABLE 10.5

GRADUATION AND DROP-OUT ACCORDING TO PROVINCE OF MATRICULATION : DEGREE AND DIPLOMA (TOTAL)

Province of Matriculation	Graduates				Drop-Outs			
	Total		Male	Female	Total		Male	Female
	No.	%			No.	%		
Natal	1249	43,5	730	519	1619	56,5	1159	460
Transvaal	191	32,4	162	29	398	67,6	321	77
Cape Province	60	32,6	38	22	124	67,4	101	23
Others	15	26,3	11	4	42	73,6	36	6
Not Indicated	18	17,5	10	8	85	82,5	55	30

The following observations and inferences are based on the data in Table 10.5:

(a) The least successful were students who entered the university with qualifications obtained by private study or from outside South Africa - only 26,3% graduated.

(b) (i) For the three Provinces the graduation rates were:

Natal : 43,5%  
 Cape Province : 32,6%  
 Transvaal : 32,4%

To establish whether the differences were significant or not, the

graduation-drop-out distributions for the three Provinces were subjected to a  $\chi^2$  test. A  $\chi^2$  value of 31,2 ( $p < 0,001$ ) was obtained. Therefore, there were highly significant differences in the proportions of students graduating and students dropping out among the three Provinces. Natal students performed significantly better than those from the Cape and Transvaal.

The above results are unlike those for first-year students (Chapter 7) whose first-year results showed no significant differences on a provincial basis.

- (ii) Because Natal graduates had a greater proportion of diploma students than the other Provinces, a  $\chi^2$  was calculated for degrees only (Data in Appendix 28). A value of 15,00 ( $p < 0,001$ ) was obtained. A highly significant difference existed between the proportions of graduates and drop-outs of Natal students (40,0% graduated) and those of the Cape and the Transvaal (33,3% and 31,9% respectively graduated).

The above result is again different from that obtained for first-year students (Chapter 7). The pass rates of Transvaal degree students were significantly higher than those of Natal and Cape Province.

- (c) The male-female distribution of graduation and drop-out for each Province was tested for significance as regards degrees and diplomas.

- (i)  $\chi^2$  for Natal was 54,14 ( $p < 0,001$ ). Natal female students had a significantly higher graduation rate (53,0%), than males (39,0%).
- (ii)  $\chi^2$  for the Transvaal was 1,52 ( $p > 0,05$ ). No significant difference existed between the graduation rates of males and females.
- (iii)  $\chi^2$  for the Cape Province was 7,18 ( $p < 0,05$ ). Female students had a significantly higher graduation rate (48,9%) than male (27,3%).



- (d) As the Natal graduation and drop-out figures contained a high proportion of diploma students, a  $\chi^2$  for Natal degree students was computed for males and females. A  $\chi^2$  of 80,88 ( $p < 0,001$ ) was obtained. Even among degree students, Natal female students were significantly more successful in graduating than Natal male students.
- (e) In order to find out whether a rural or urban location of high schools had an influence on graduating or dropping out, high schools attended by students were categorised as "city" schools where the population was equal to or greater than 100 000 and as "town" schools where the population was less. The town schools are also rural in character as they draw a large proportion of their pupils from the surrounding rural areas. The  $\chi^2$  for this city-town dichotomy was 1,00 ( $p > 0,05$ ) and not significant. Graduating or dropping out was independent of whether the student's high school was in an urban area or rural.

Results similar to the above, were obtained for first-year degree students (Chapter 7). However, first-year diploma students from towns performed significantly better in their examinations than city students.

#### 10.2.6. Commuter Distance and Graduation or Drop-out

Distances travelled by students to University - single journey by road - are given in Table 10.6 (p. 324) which shows the distribution of Commuter distance for the graduates and drop-outs for degrees and diplomas.

Hostel students were categorised as "0" km for commuter distance. (A more detailed distribution according to full-time or part-time, male or female, for each Faculty appears in Appendix 29, p. 430).

TABLE 10.6

## COMMUTER DISTANCE AND GRADUATION OR DROP-OUT : DEGREE, DIPLOMA

Commuter Distance in kilometres	Degree				Diploma			
	Graduates		Drop-Outs		Graduates		Drop-Outs	
	No.	%	No.	%	No.	%	No.	%
0	327	35,8	586	64,2	37	60,7	24	39,3
1 - 10	556	40,4	819	59,6	114	53,0	101	47,0
11 - 20	92	33,9	179	66,1	50	59,5	34	40,5
21 - 35	214	36,3	376	63,7	97	61,0	62	39,0
35 <sup>+</sup>	34	37,0	58	63,0	4	40,0	6	60,0
Not Indicated	6	22,2	21	77,8	2	50,0	2	50,0

The following observations and inferences are derived from Table 10.6:

- (a) For degree students the drop-out rate was 59,6% or higher for all categories. One would have expected the hostel students to be more successful than the others because of the advantages of being on campus, but this is apparently not so.

In fact, the best performance comes from students who lived within a 10 km radius of the university, with 40,4% success.

- (b) A  $\chi^2$  was calculated to see if the distributions in Table 10.6 differed significantly or not. A  $\chi^2$  value of 7,92 ( $p > 0,05$ ) was obtained for degrees, and a value of 2,46 ( $p > 0,05$ ) for diplomas. Therefore, the student proportions of graduates and drop-outs were independent of commuter distance.

The above result for diploma students is similar to that found for first-year students (Chapter 7). However, for first-year degree students, commuter distance was significantly related to first-year examination results, with students travelling shorter distances to university performing better than others.

Information from Appendix 22 was used to ascertain whether the sex of the commuting student influenced graduation and drop-out.  $\chi^2$  was calculated for male-female distributions of graduates and drop-outs for degree and diploma students for each commuter category. The results are shown in Table 10.7.

TABLE 10.7

$\chi^2$  FOR MALE-FEMALE DISTRIBUTIONS OF COMMUTER DISTANCE FOR GRADUATES AND DROP-OUTS

Degree/ Diploma	$\chi^2$ / Significance	Commuter Distance				
		0km	1-10km	11-20km	21-35km	35 <sup>+</sup> km
Degree	$\chi^2$	3,59	23,42	2,28	23,46	0,71
	Significance	p > 0,05	p < 0,001	p > 0,05	p < 0,001	p > 0,05
Diploma	$\chi^2$	3,65	0,05	2,28	1,92	
	Significance	p > 0,05	p > 0,05	p > 0,05	p > 0,05	

Table 10.7 provides the following information:

- (a) Female students reading for degrees and commuting within radii in the ranges 1-10km and 21-35km constituted a significantly greater proportion of graduates than drop-outs with 49,7% and 53,6% respectively graduating, compared with male students with percentages of 36,1% and 31,0% respectively.



- (b) The other categories of commuter distance had no bearing on the graduation or drop-out rates based on the sex of degree students.
- (c) For diploma students, graduating or dropping out was independent of the sex of the student in every commuter distance category.

The effect of commuter distance on graduation and drop-out among full-time and part-time degree students was analysed as shown in Table 10.8.

TABLE 10.8

COMMUTER DISTANCE AND GRADUATION OR DROP-OUT OF FULL-TIME AND PART-TIME STUDENTS

	0km	1-10km	11-20km	24-35km	35 <sup>+</sup> km
$\chi^2$		8,10	3,47	3,98	0,00
Significance		p < 0,01	p > 0,05	p > 0,05	p > 0,05

Table 10.8 reveals that the category 1-10km is the only one that had a significant bearing on graduation and drop-out, with full-time students having a significantly higher graduation rate (37,0%) than part-time (24,0%). This is in accord with the earlier finding that the graduation rate is highest among those students living within a 10km radius from the university.

#### 10.2.7. Home Language and Graduation or Drop-out

Table 10.9 (p. 327) shows the distribution of graduates and drop-outs according to language spoken at home (A more detailed distribution, including male and female, appears in Appendix 30, p. 431).

TABLE 10.9

## HOME LANGUAGE AND GRADUATION OR DROP-OUT

Home Language	Degree				Diploma			
	Graduates		Drop-outs		Graduates		Drop-outs	
	No.	%	No.	%	No.	%	No.	%
Afrikaans	6	33,3	12	66,7	0	0	0	0
Afrikaans and English	22	32,4	46	67,6	0	0	1	100
English	587	36,4	1024	63,6	154	55,4	124	44,6
Gujerati	247	43,9	316	56,1	20	57,1	15	42,9
Hindi	104	39,2	161	60,8	46	63,9	26	36,1
Memon	38	42,7	51	57,3	1	25,0	3	75,0
Tamil	90	37,5	150	62,5	37	62,7	22	37,3
Telegu	26	32,9	53	67,1	9	69,2	4	30,8
Urdu	47	40,2	70	59,8	6	54,5	5	45,5
Not indicated	62	28,4	156	71,6	31	51,7	29	48,3

The following observations and inferences are made from the data in Table 10.9:

- (a) Among degree students Gujerati-speaking students had the highest percentage of graduates - 43,9%; followed by Memon - 42,7%; and Urdu - 40,2%. At the other end of the scale were Afrikaans with 33,3%; Telegu - 32,9%; and Afrikaans and English - 32,4%.
- (b) A  $\chi^2$  was computed for the distribution of graduates and drop-outs for degree students over the 9 languages. A value of 16,96 ( $p < 0,05$ ) was obtained. Gujerati 43,9%; Memon 42,7% and Urdu 40,2% had significantly greater proportions of students graduating

than other language groups like Afrikaans - 33,3% graduating; Telegu and Afrikaans 32,4%.

The above results are different from those for first-year pass rates (Chapter 7). Gujerati and Memon which had significantly higher graduation rates than other languages, also had significantly higher pass rates in the first year. However, two language groups - Afrikaans, and English and Afrikaans - which were found to be significantly superior to others in the first year, had become significantly inferior to Gujerati and Memon when graduation was considered.

- (c) A  $\chi^2$  was calculated for the distribution of graduates and drop-outs for diplomas and a value of 3,80 ( $p > 0,05$ ) was obtained. Graduation or drop-out among diploma students was independent of home language.

Similar results were obtained for home language and diploma students in the first-year examinations (Chapter 7).

#### 10.2.8. Age (Chronological) and Graduation or Drop-out

Table 10.10 (p. 329) shows the distribution of graduates and drop-outs according to chronological age. Data are given relating to degree and diploma. (A more detailed distribution, including total, male and female, appears in Appendix 31, p. 432).

The following observations and inferences are made from Table 10.10:

- (a) (i) It is clear that among degree students, the younger students were more successful than the older ones. Students in the age group 19 years and under were much more successful than those 20 years and older. The percentages show an inverse relationship between age and graduation : the older the,



TABLE 10.10

AGE AND GRADUATION OR DROP-OUT : DEGREE, DIPLOMA

Age in Years	Degree				Diploma			
	Graduates		Drop-outs		Graduates		Drop-outs	
	No.	%	No.	%	No.	%	No.	%
≤ 17	124	44,3	156	55,7	10	62,5	6	37,5
18	451	40,6	660	59,4	97	59,9	65	40,1
19	348	40,9	502	59,1	82	51,3	78	48,8
20	130	32,3	273	67,7	70	59,3	48	40,7
21	46	25,7	133	74,3	28	59,6	19	40,4
22-25	51	24,8	155	75,2	6	54,5	5	45,5
26-30	17	23,6	55	76,4	0	0,0	0	0,0
31 <sup>+</sup>	25	24,5	77	75,5	5	45,5	6	54,5
Not Indicated	36	56,3	28	43,8	6	75,0	2	25,0

student the less likely he is to graduate.

- (ii) A  $\chi^2$  was computed for distribution of graduates and drop-outs for the degree students in Table 10.10. A value of 55,18 was obtained ( $p < 0,001$ ). Graduating or dropping out had a highly significant dependence on age. The younger student had a significantly better chance to graduate than the older.

Similar results were obtained between age and passing first year, the younger student being significantly more successful than the older (Chapter 7).

- (b) (i) For diploma students no distinct pattern emerged. One would conclude that age was not a factor in the diploma student's

chances of graduating or dropping out.

- (ii) A  $\chi^2$  was calculated for diploma students and a value of 3,90 ( $p > 0,05$ ) was obtained. This confirms that for diploma students age was not significant for graduation or drop-out.

Similar results were obtained for first-year pass rates. Age was not a significant factor for diploma students (Chapter 7).

The influence of age on graduation or drop-out was studied on a Faculty basis. (Appendix 32, p. 433, shows the distributions of graduates and drop-outs according to age for each Faculty).

$\chi^2$  was computed for graduates and drop-outs according to age over the five Faculties for degree students. The values of  $\chi^2$  obtained were: Arts 43,67 ( $p < 0,001$ ); Commerce 56,29 ( $p < 0,001$ ); Education 15,52 ( $p < 0,05$ ); Law 3,51 ( $p > 0,05$ ); Science 20,10 ( $p < 0,01$ ).

The above data showed that, while age was a highly significant factor in graduating or dropping out for the total, there was some differentiation when individual Faculties were considered. Age was a highly significant factor for Arts and Commerce ( $p < 0,001$ ). It was significant - though not highly - for Science ( $p < 0,01$ ). It was significant for Education ( $p < 0,05$ ). In these four Faculties the younger students were more successful than the older ones. However, age had no effect on graduation or drop-out for the Law Faculty ( $p > 0,05$ ).

#### 10.2.9. Matriculation Status and Graduation or Drop-Out

Table 10.11 (p. 330) shows the distribution of matriculation status of graduates and drop-outs for degrees and diplomas. (Appendix 33, p. 434 contains a more detailed distribution including total, part-time,

full-time, male and female).

TABLE 10.11

MATRICULATION STATUS AND GRADUATION OR DROP-OUT.....

Matriculation Status	Degree				Diploma			
	Graduates		Drop-outs		Graduates		Drop-outs	
	No.	%	No.	%	No.	%	No.	%
Full Matriculation Exemption	1155	43,2	1519	56,8	84	78,5	73	21,5
Conditional/Mature Age Exemption	59	17,5	278	82,5	11	36,7	19	63,3
Senior Certificate without Matriculation Exemption	3	15,8	16	84,2	203	61,9	125	38,1
Not Indicated	12	5,0	226	95,0	6	8,8	62	91,2

The following observations and inferences are made from Table 10.11:

- (a) Students with full matriculation exemption were far more successful than those without full exemption, for both degrees and diplomas.
- (b)  $\chi^2$  was computed separately, for the degree and diploma graduates and drop-outs, to ascertain whether matriculation status had a significant influence on graduation and drop-out. A dichotomy of "full-matriculation exemption" versus "others", was employed.
- (i) A  $\chi^2$  of 22,21 was obtained for degree students ( $p < 0,001$ ). Graduation or drop-out had a highly significant dependence on matriculation status, with the students with full matriculation exemption performing significantly better than others.

Similar results were obtained for first-year students : students



with full matriculation exemption were more successful in the first-year examinations than others (Chapter 7).

- (ii) For diploma students a  $\chi^2$  of 12,55 was obtained ( $p < 0,001$ ). The conclusion made for degree students applies to diploma students as well. Students with full matriculation exemption achieved significantly better than others.
- (c) A  $\chi^2$  was computed to establish whether, for part-time students, graduation or drop-out was dependent on matriculation status. A  $\chi^2$  value of 22,04 ( $p < 0,001$ ) was obtained. Again graduation or drop-out had a highly significant dependence on matriculation status. Students with full matriculation exemption performed much better than those without it.

#### 10.2.10. Matriculation Aggregate and Graduation or Drop-Out

Table 10.12 (p. 333) shows the distribution of matriculation aggregates for graduates and drop-outs for degrees and diplomas. (Details about part-time, full-time, male and female students are given in Appendix 34, p. 436).

Of the 1533 graduates 302 (19,7%) did not indicate their matriculation aggregates. Of the 2268 drop-outs 818 (36,1%) also did not indicate their matriculation aggregates. The distribution of the matriculation aggregates of the remaining students is shown in Table 10.12.

The following observations and inferences arise from Table 10.12:

- (a) As far as the degree students are concerned there was a conspicuous relationship between matriculation aggregate and graduating or dropping out. The better the matriculation aggregate the higher the chances of graduation. Students with C<sup>+</sup> aggregates (43,1% graduating)

TABLE 10.12

## MATRICULATION AGGREGATE AND GRADUATION OR DROP-OUT

Matriculation Aggregate	Degree				Diploma			
	Graduates		Drop-Outs		Graduates		Drop-Outs	
	No.	%	No.	%	No.	%	No.	%
A	1	100	0	0	-	-	-	-
B	3	75,0	1	25,0	-	-	-	-
C	77	42,1	106	57,9	-	-	-	-
D	498	44,4	623	55,6	29	59,2	20	40,8
E <sup>+</sup>	359	39,7	546	60,3	97	80,8	23	19,2
E	8	33,3	16	66,7	159	62,8	94	37,2
F	-	-	-	-	-	-	21	100

and D aggregates (44,4% graduating) were more successful than students with E<sup>+</sup> and lower aggregates (39,5% graduating).

- (b) A  $\chi^2$  was computed for the degree distribution and a value of 6,92 ( $p < 0,05$ ) was obtained for the three categories  $\leq E^+$ , D and C<sup>+</sup>. A significantly greater proportion of students with D aggregates and higher, graduated, than did students with E<sup>+</sup> aggregates and lower.

The above results are similar to those obtained for first-year students (Chapter 7). Students with higher matriculation aggregates performed significantly better than students with lower aggregates.

Appendix 35, p. 437, shows the distribution of matriculation aggregates on a Faculty basis for graduates and drop-outs. The analysis of the aggregates on a Faculty basis was as follows:

(a) (i)  $\chi^2$  tests were applied to degree students in each Faculty to identify those Faculties where graduating or dropping out was dependent on matriculation aggregate. The  $\chi^2$  values for the Faculties were as follows:

Arts	4,83	(p > 0,05)
Commerce	8,21	(p < 0,05)
Education	0,53	(p > 0,05)
Law	0,42	(p > 0,05)
Science	12,97	(p < 0,01)

Matriculation aggregate therefore was a significant factor in graduation and drop-out for Science (p < 0,01) and Commerce (p < 0,05). Students with better aggregates were more likely to graduate in these Faculties. Matriculation aggregate was not a significant factor for the other Faculties, i.e., Arts, Education and Law.

When the results of first-year students were correlated with matriculation aggregate, it was found that only D and E<sup>+</sup> aggregates were significantly related to first-year pass rates of Faculties (Chapter 7). Commerce was significantly superior to the others of which Arts, Education and Law were significantly superior to Science.

(ii)  $\chi^2$  tests were applied to diploma students who were successful at all three aggregate levels, especially the E<sup>+</sup> aggregate.

A  $\chi^2$  was computed for the diploma distribution and a value of 19,55 was obtained (p < 0,001). A significantly greater proportion of students with E<sup>+</sup> aggregates graduated (80,8%) than did students with E aggregates (62,8%).



The above result for diplomas was different from that of the first year when matriculation aggregate was found to have no significant influence on passing or failing first year (Chapter 7).

- (b) An analysis of matriculation aggregates among graduates and drop-outs was undertaken on the basis of the sex of the student. The analysis was conducted as follows:

For each aggregate a  $\chi^2$  test was made on the differences in the proportions of graduates and drop-outs of males and females.

- (i) For degree students the  $\chi^2$  values for  $\leq E^+$ , D and  $C^+$  were 16,30 ( $p < 0,001$ ); 16,43 ( $p < 0,001$ ) and 6,25 ( $p < 0,05$ ) respectively. In each aggregate the proportions of females graduating was significantly higher than males, particularly for  $\leq E^+$  and D.

The above results differed from those for first-year students. For each matriculation aggregate, the sex of the student had no significant effect on passing or failing first year (Chapter 7).

- (ii) For diploma students the  $\chi^2$  values for  $\leq E^-$ ,  $E^+$  and D were 0,31; 0,26 and 2,7 respectively, with  $p > 0,05$  for all three. Male and female graduation rates among diploma students were not dependent on matriculation aggregate.

The above results are similar to those found for diploma students in the examinations of first year (Chapter 7).

- (c) The graduation-drop-out data of full-time and part-time students were analysed.  $\chi^2$  was calculated for full-time and part-time students over the category  $\leq E^+$  as the other categories had too few entries. A value of 1,58 ( $p > 0,05$ ) was obtained. Graduation and drop-out among full-time and part-time students was not significantly different for the  $\leq E^+$  aggregates.

### 10.2.11. Symbols for Matriculation Subjects and Graduation or Drop-out

The eight subjects that were taken with the highest frequencies by matriculation students in this research were:

English, Mathematics, Biology, Afrikaans, Geography, Accountancy, History and Physical Science. These subjects were subjected to extensive analyses for those students who had indicated the subjects they passed for matriculation, together with the symbols.

Table 10.13 (p.337) shows the percentage distribution of symbols for graduates and drop-outs in each subject. (Appendix 36, p. 439, shows the distribution for each Faculty as well).

Table 10.13 shows that except for Mathematics, the distribution of symbols of graduates and drop-outs in all subjects taken for matriculation did not differ significantly.

For Mathematics a highly significant relationship existed between the distribution of symbols for graduates and drop-outs. The value of  $\chi^2 = 25,85$  ( $p < 0,001$ ) indicated that drop-outs had a significantly superior distribution of Mathematics symbols than graduates. An inspection of the distribution of symbols reveals that, while the proportions of E, D, B and A symbols of both groups in Mathematics showed little difference, those for the F symbols, where graduates number 11% and drop-outs 5%, and the C symbols, where drop-outs numbered 20% and graduates 16%, showed appreciable differences; hence the significance.

The above results for graduation differ from those obtained for first-year, when the following six subjects were found to be significantly related to passing or failing first year: Mathematics, Physical Science, Biology, Afrikaans, Geography and Accountancy (Chapter 7). All relation-

TABLE 10.13

PERCENTAGE DISTRIBUTION OF SYMBOLS OF MATRICULATION SUBJECTS OF AGGREGATES AND DROP-OUTS : DEGREE AND DIPLOMA

Matriculation Subjects	Graduates or Drop-outs	Percentage Students Per Symbol						Total No. (A-F)	$\chi^2$ and p
		A	B	C	D	E	F		
English	Graduates	0,2	0,6	6,9	36,0	55,7	0,5	1113	3,86 (p > 0,05)
	Drop-outs	0,2	0,6	6,4	32,6	59,6	0,6	1254	
Mathematics	Graduates	2,7	4,9	16,4	30,5	34,5	11,1	940	25,85 (p < 0,001)
	Drop-outs	3,0	6,3	20,0	31,1	34,3	5,3	1066	
Biology	Graduates	0	0,6	11,7	35,2	43,7	8,8	829	3,70 (p > 0,05)
	Drop-outs	0	1,2	10,7	34,3	46,5	7,4	861	
Afrikaans	Graduates	0,1	0,4	4,4	21,8	62,6	10,6	728	2,50 (p > 0,05)
	Drop-outs	0,1	0,9	4,2	19,7	63,3	11,8	920	
Geography	Graduates	0,2	2,4	9,1	29,4	45,7	13,2	834	1,92 (p > 0,05)
	Drop-outs	0,4	1,6	8,8	29,2	44,9	15,1	760	
Accountancy	Graduates	4,2	14,2	28,6	33,2	16,5	3,3	479	8,03 (p > 0,05)
	Drop-outs	5,1	9,6	29,2	35,6	18,6	2,0	554	
History	Graduates	3,1	7,2	29,2	33,7	23,9	2,9	514	8,11 (p > 0,05)
	Drop-outs	3,1	10,0	23,4	32,4	28,8	2,3	482	
Physical Science	Graduates	1,3	3,7	22,1	37,5	29,1	6,4	299	4,38 (p > 0,05)
	Drop-outs	0,6	3,9	21,1	36,4	34,2	3,7	483	



ships were positive.

The analysis of subjects and symbols was extended to each Faculty. Table 10.14 (p. 339) contains the  $\chi^2$  values obtained when the distribution of graduates and drop-outs in each Faculty was tested against matriculation subjects and symbols.

The following conclusions are drawn from Table 10.14 for each subject:

- (a) English: For English, only the  $\chi^2$  for the Arts Faculty was significant ( $p < 0,05$ ). Graduating or dropping out in the Faculty of Arts was significantly dependent on the matriculation English symbol obtained. The higher the symbol the better were the chances of graduating.

In the first year, English was a significant predictor of passing or failing in the Faculties of Arts and Law. (Chapter 7).

- (b) Mathematics: Mathematics was significant for the Faculty of Science only ( $p < 0,01$ ). Graduating or dropping out in the Faculty of Science was dependent on the symbol obtained for matriculation Mathematics, with graduates having a better distribution of Mathematics symbols than drop-outs.

In the first year, Mathematics was a significant predictor of passing or failing in the Faculties of Science, Commerce and Law (Chapter 7).

- (c) Biology: Biology was significantly related to Commerce and Science Faculties (both at  $p < 0,01$ ). Graduating or dropping out in the Faculties of Commerce and Science was significantly dependent on the matriculation symbol in Biology. Students with higher Biology symbols had better prospects of graduating.

In the first-year examination Biology was significantly related to passing or failing in the Faculty of Science only (Chapter 7).

TABLE 10.14

$\chi^2$  FOR DISTRIBUTION OF MATRICULATION SYMBOLS OF GRADUATES AND DROP-OUTS FOR EACH MATRICULATION SUBJECT ACCORDING TO FACULTY

Matriculation Subjects	Arts		Commerce		Education		Law		Science		Total	
	$\chi^2$	p	$\chi^2$	p	$\chi^2$	p	$\chi^2$	p	$\chi^2$	p	$\chi^2$	p
English	8,40	< 0,05	1,08	-	3,40	-	0,89	-	3,42	-	3,86	-
Mathematics	4,10	-	8,94	-	7,42	-	0,00	-	14,35	< 0,01	25,85	< 0,001
Biology	4,47	-	13,62	< 0,01	3,43	-	0,06	-	11,89	< 0,01	3,70	-
Afrikaans	15,41	< 0,01	3,82	-	4,65	-	0,09	-	2,73	-	2,50	-
Geography	2,35	-	0,55	-	4,45	-	3,14	-	3,28	-	1,92	-
Accountancy	0,19	-	19,47	< 0,001	7,51	-	0,01	-	23,92	< 0,001	8,03	-
History	12,48	< 0,05	2,00	-	0,28	-	0,80	-	0,75	-	8,11	-
Physical Science	3,09	-	7,87	< 0,05	2,77	-	1,28	-	9,27	< 0,05	4,38	-

NOTE: p is indicated only for significant  $\chi^2$ .

- (d) Afrikaans: Afrikaans was significant for the Arts Faculty ( $p < 0,01$ ). Students with superior symbols in matriculation Afrikaans had better chances of graduating in the Faculty of Arts.

In the first-year examinations Afrikaans was significantly related to passing or failing in the Faculties of Arts, Commerce and Law (Chapter 7).

- (e) Geography: Geography was not related significantly to any Faculty.

In the first year, Geography was significantly related to passing or failing in the Faculty of Science (Chapter 7).

- (f) Accountancy: Accountancy had highly significant relationships with Commerce and Science. For Commerce, Accountancy was positively significant, i.e., better symbols in matriculation Accountancy were associated with higher graduation rates at university. However, for Science the position was reversed, with high symbols in Accountancy associated with reduced graduation rates.

The above results for Accountancy were similar to those obtained for passing or failing first year. Accountancy was significantly related to success (positively) in the Faculties of Commerce and Science (Chapter 7).

- (g) History: History was significant for the Arts Faculty only ( $p < 0,05$ ). Success in the Faculty of Arts was significantly dependent on the History symbol obtained in the matriculation examinations. The higher the symbol the greater were the chances of graduation.

In the first-year examinations History was significantly related to passing or failing in the Faculties of Arts and Science (Chapter 7).



(h) Physical Science: Physical Science was significantly related to the Faculties of Commerce ( $p < 0,05$ ) and Science ( $p < 0,05$ ).

In both Faculties the better the Physical Science symbol the greater the chances of graduating.

In the first year Physical Science was significantly related to examination performance in the Science Faculty only (Chapter 7).

10.2.12. The Number of Courses Offered for Examination in the first year and Graduation or Drop-out

A count was made of the number of students who sat first-year examinations in 2 or 3 or 4 or 5 or 6 first-year courses. For each group, the number who graduated and the number who did not graduate, are shown in Table 10.15.

TABLE 10.15

NUMBER OF COURSES OFFERED FOR EXAMINATIONS IN FIRST YEAR; AND GRADUATING OR NOT GRADUATING

Number of courses offered For Examination in First Year	Number Graduating		Number not Graduating	
	No.	%	No.	%
2	23	15,9	122	84,1
3	132	29,7	313	70,3
4	537	40,2	799	59,8
5	626	47,8	684	52,2
6	215	66,6	108	33,4

The following observations and inferences arise from Table 10.15:

(a) Those students taking more courses in the first year were more

successful in graduating than those students taking fewer courses.

There was a steady increase in the percentage graduating, from 15,9% for those sitting for examinations in 2 courses to 66,6% for those taking 6 courses in the first year.

Two points have to be remembered. Firstly, nearly half the students offering 2 courses were part-time students and about 38% of those offering 3 courses were also part-time. Part-time students are restricted in the number of courses they enrol for. They also work under obvious handicaps and do not do as well as full-time students. Secondly, most of those offering 6 courses were diploma students in the Faculty of Education. These students were more successful than other diploma and degree students.

- (b) With the factors mentioned above in mind,  $\chi^2$  was computed for each of the following groups:
- (i) All groups in Table 10.15:  $\chi^2 = 165,08$  ( $p < 0,001$ );
  - (ii) All groups, excepting those taking 6 courses, thus excluding the Education Diploma students:  $\chi^2 = 86,57$  ( $p < 0,001$ );
  - (iii) Groups offering 3,4 or 5 courses:  $\chi^2 = 47,25$  ( $p < 0,001$ );
  - (iv) Groups offering 4 or 5 courses, thus including most of the full-time students:  $\chi^2 = 15,47$  ( $p < 0,001$ ).

All  $\chi^2$  values were significant. In all four cases students who attempted more courses in their first year were more successful in graduating than those attempting fewer courses.

Similar results were obtained for first-year students (Chapter 7).

A plausible explanation is that the intellectually superior student not only took more subjects in his first year than the intellectually inferior student but was also more successful in the examination.

### 10.2.13. Number of Courses Failed, and Graduation or Drop-out

In the previous Chapter (9) the achievement of drop-outs was assessed. The number of courses passed by drop-outs was tabulated. Here the number of courses failed by graduates is compared with the number failed by drop-outs.

Table 10.16 shows the number of courses failed over the years by students who eventually graduated. (Appendix 37, p. 440, contains a more detailed distribution including Faculties).

TABLE 10.16

NUMBER OF COURSES FAILED BY STUDENTS BEFORE OBTAINING A DEGREE OR DIPLOMA

		Number of Graduates who Failed										Total Students
		0 Courses	1 Course	2 Courses	3 Courses	4 Courses	5 Courses	6 Courses	7 Courses	8 Courses	9 Courses	
Degree	No.	332	257	205	172	116	49	59	24	14	1	1229
	%	27,0	20,9	16,7	14,0	9,4	4,0	4,8	2,0	1,1	0,1	100
Diploma	No.	125	57	53	35	13	10	7	1	3	0	304
	%	41,1	18,8	17,4	11,5	4,3	3,3	2,3	0,3	1	0	100
Total	No.	457	314	258	207	129	59	66	25	17	1	1533
	%	29,8	20,5	16,8	13,5	8,4	3,8	4,3	1,6	1,1	0,1	100

Table 10.16 reveals the following about the graduates:

(a) Degree:

- (i) 332 (27,0%) graduated without failing a single course,
- (ii) 257 (20,9%) failed only one course before graduating,
- (iii) 205 (16,7%) failed two courses,
- (iv) 172 (14,0%) three courses,



- (v) 116 (9,4%) four courses,
  - (vi) 137 (12,0%) failed five or more courses.
- (b) Diploma: Diploma graduates were more successful with
- (i) 41,1% passing all subjects, and
  - (ii) 36,2% failing one or two subjects only.

Table 10.17 shows the number of courses failed by drop-outs. Those who left in the first year before the DP announcements, are excluded. (A more detailed distribution appears in Appendix 37,p. 440)

TABLE 10.17

NUMBER OF COURSES FAILED BY DROP-OUTS

		Number of Drop-outs Failing										Total Students
		0 Courses	1 Course	2 Courses	3 Courses	4 Courses	5 Courses	6 Courses	7 Courses	8 Courses	9 Courses	
Degree	No.	263	289	306	267	175	127	85	37	31	33	1613
	%	16,3	17,9	19,0	16,6	10,8	7,9	5,3	2,3	1,9	2,0	100
Diploma	No.	22	28	28	25	19	10	9	3	1	3	148
	%	14,9	18,9	18,9	16,9	12,8	6,8	6,1	2,0	0,7	2,0	100
Total	No.	285	317	334	292	194	137	94	40	32	36	1761
	%	16,2	18,0	19,0	16,6	11,0	7,8	5,3	2,3	1,8	2,0	100

The following facts emerge from Table 10.17:

(a) Degrees:

- (i) 33 drop-outs (2,0%) failed nine courses or more - almost the number required for some degrees,

- (ii) Another 31 (1,9%) failed eight courses,
  - (iii) 37 (2,3%) failed seven courses,
  - (iv) 85 (5,3%) six courses,
  - (v) 127 (7,9%) five courses,
  - (vi) 175 (10,8%) four courses.
- (b) Diploma: For diploma students the pattern of failure was similar to that for degree students.

The distributions for degree students in Table 10.16 (graduates) and 10.17 (drop-outs) were subjected to  $\chi^2$  tests on a Faculty basis (See Appendix 37, p. 440, for distributions according to Faculty). The results were as follows:

- (a) Significant values for  $\chi^2$  were obtained for the Faculties of
- Arts :  $\chi^2 = 26,26$  ( $p < 0,001$ );
  - Commerce:  $\chi^2 = 62,02$  ( $p < 0,001$ );
  - Education:  $\chi^2 = 29,84$  ( $p < 0,001$ ). In these three Faculties graduates failed significantly fewer courses than drop-outs.
- (b) For Science,  $\chi^2$  was 11,25 ( $p > 0,05$ ). No significant difference existed between graduates and drop-outs with regard to the number of courses failed. Science graduates had generally failed many courses before graduating.
- (c) No  $\chi^2$  was computed for Law as the entries were too small.

#### 10.2.14. Duly-Performed Certificates and Graduation or Drop-out

An analysis was made of Duly Performed Certificates (DPs) refused to students, i.e., "Xdps", for the period 1973 to 1975. The year 1976 was excluded as a number of Departments and the entire Faculty of Commerce had changed to the semester system in that year. In 1975, only the Department of Zoology operated on the semester basis for the first time

and for Zoology the refusal of DPs for both semesters was counted as one Xdp.

#### 10.2.14.1. Distribution of Xdps According to Faculty

Appendix 38, p. 441, shows the distribution of Xdps for all students from the 1973-1975 first-year intakes, according to Faculty. Students excluded from the count were those who dropped out before the DP's were announced.

Table 10.18 contains data relating to degree students.

TABLE 10.18

DISTRIBUTION OF XDPS ACCORDING TO FACULTY FOR DEGREE STUDENTS FROM THE 1973-1975 FIRST-YEAR INTAKES

Faculty	Number of Students Receiving										Total		
	0 Xdp		1 Xdp		2 Xdps		3 Xdps		4 Xdps			5 <sup>+</sup> Xdps	
	No.	%	No.	%	No.	%	No.	%	No.	%		No.	%
Arts	253	57,5	87	19,8	50	11,4	27	6,1	15	3,4	8	1,8	440
Commerce	218	53,4	81	19,9	55	13,5	27	6,6	13	3,2	14	3,4	408
Education	61	65,6	21	22,6	5	5,4	3	3,2	1	1,1	2	2,2	93
Law	16	21,1	22	28,9	9	11,8	12	15,8	7	9,2	10	13,2	76
Science	334	62,0	91	16,9	58	10,8	37	6,9	12	2,2	7	1,3	539
Total	882	56,7	302	19,4	177	11,4	106	6,8	48	3,1	41	2,6	1556

The following facts and inferences relate to Table 10.18:

- (a) A little more than half of the total number of degree students were granted full DP's (882 out of 1556). Of this number, statistics on the basis of Faculties were as follows:

Education                      65,6%



Science	62,0%
Arts	57,5%
Commerce	53,4%
Law	21,1%.

(b) Of the degree students who were refused DP's

19,4% were refused in 1 course,

11,4% in 2 courses,

6,8% in 3 courses,

3,1% in 4 courses and

2,6% in 5 or more courses.

Altogether 43,3% of the total number of students were refused permission to write examinations in one or more courses.

(c)  $\chi^2$  for the distributions in Table 10.18 was 93,15 ( $p < 0,001$ ).

Therefore significant differences existed in the distributions of DP refusals among the five Faculties.

Male-female distributions of Xdps (Appendix 38, p. 441) were subjected to a  $\chi^2$  test. The value of 13,33 ( $p < 0,05$ ) indicated that female students were significantly more successful in gaining DP awards than male students.

#### 10.2.14.2. Distribution of Xdps on a Faculty basis for Graduates and Drop-outs

Table 10.19 (p. 348) shows the distribution of Xdps of graduates and drop-outs for degree students according to Faculty. Students who dropped out before Xdp announcements were made, are excluded. (Appendix 39, p. 442 contains a more detailed distribution.)

TABLE 10.19

DISTRIBUTION OF XDPS GRANTED TO GRADUATES AND DROP-OUTS OF 1973-1975 FIRST-YEAR INTAKE : DEGREE STUDENTS

Faculty	Graduates							Drop-Outs						
	Percentage Students Receiving						Total	Percentage Students Receiving						Total
	0 Xdps	1 Xdp	2 Xdps	3 Xdps	4 Xdps	5 <sup>+</sup> Xdps		0 Xdps	1 Xdp	2 Xdps	3 Xdps	4 Xdps	5 <sup>+</sup> Xdps	
	%	%	%	%	%	%		%	%	%	%	%	%	
Arts	62,1	19,8	9,7	4,4	2,6	1,3	227	53,2	20,0	14,7	8,4	2,6	1,1	190
Commerce	74,7	15,1	4,8	4,8	0,7	0	146	52,9	18,9	14,3	4,2	4,2	5,5	238
Education	74,5	17,6	5,9	2,0	0	0	51	41,7	44,8	4,2	8,3	0	0	24
Law	30,0	20,0	20,0	10,0	10,0	10,0	10	21,0	30,6	9,7	17,7	8,1	12,9	62
Science	73,0	17,6	5,4	2,7	0,7	0,7	148	63,8	15,8	10,5	6,8	1,9	1,2	323

The data in Table 10.19 show that:

- (a) Of the students awarded full DP's (category 0 Xdps) the graduates in the Faculties of Education and Commerce exceeded the drop-outs by big margins.
- (b) However, in Arts, Law and Science, although bigger proportions of graduates received full DP's than drop-outs, the differences were not so large.
- (c) With the exception of the Law Faculty, graduates had a superior DP record than drop-outs when the full Xdp distributions in Table 10.19 were considered.
- (d) One can conclude therefore, that graduation and drop-out are influenced by the DP awards. The greater the proportion of students in a Faculty that are refused one or more DP's, the greater are the chances that drop-out will be greater in that Faculty.

### 10.3. SUMMARY

#### DISTRIBUTION OF GRADUATES AND DROP-OUTS

Total: Of the 4120 first-year students (of 1971-1976) 37,2% (1533) graduated; 55,0% (2268) dropped out; 7,7% (319) were still studying (as at December 1980). Of the students who had either graduated or dropped out 1229 (37,6%) degree students graduated while 2039 (62,4%) dropped out. Among Diploma students 304 (57,0%) graduated and 229 (43,0%) dropped out.

#### FACTORS PREDICTING GRADUATION OR DROP-OUT

- (a) Degree or Diploma: Significantly more diploma students graduated (57,0%) than degree students (37,6%).
- (b) Faculty:  
Degree Students: The graduation rates per Faculty were:



Education 50,0%; Arts 46,6%; Commerce 39,1%; Science 27,7%; Law 14,1%. Significant differences existed between the pass rates of the various Faculties.

Diploma Students: The three Faculties involved showed significant differences in their graduation rates: Education 72,2%; Arts 20,5%; Commerce 8,2%.

(c) Full-time, Part-time Enrolments:

Degree Students: In the Faculties of Arts and Commerce, full-time students had a significantly higher graduation rate (46,0%) than part-time (25,6%). (There were no part-time diploma students).

(d) Sex of Student:

Degree: The female graduation rate (46,4%) was significantly greater than the male rate (34,1%).

Diploma: The difference between the graduation rates of the male diploma students (53,6%) and females (61,2%) was not significant.

Faculty: In the Faculties of Arts, Education and Science, female students had significantly higher graduation rates than males. The sex of the student was not significant for graduation in the Faculties of Commerce and Law.

(e) Province of Matriculation:

Total: Natal students were significantly more successful (43,5% graduated) than those from the Cape Province (32,6%) and the Transvaal (32,4%).

Degrees: Again Natal students were significantly more successful (40,0% graduated) than those from the Cape Province (33,3%) and the Transvaal (31,9%).

Sex of Student: Female students from Natal and the Cape Province were significantly more successful in graduating than male students.

No such differences existed for students from the Transvaal.

(f) Commuter Distance: No significant differences were found between commuter distance and graduation or drop-out.

(g) Home Language:

Degree: Students whose home languages were Gujerati (43,9% graduated); Memon (42,7%); or Urdu (40,2%); performed significantly better than others: Afrikaans (33,3%); Telegu (32,9%); English and Afrikaans (32,4%).

Diploma: No significant relationships were found between home language and graduation rates among diploma students.

(h) Age:

Degree: Younger students - 19 years and below - had significantly higher graduation rates than older ones.

Diploma: No significant differences existed between age and graduation.

Faculty: Except for the Law Faculty where age was not significant in graduation or drop-out, all other Faculties had graduation rates in which younger students performed significantly better than the older students.

(i) Matriculation Status:

Degree: Students with full matriculation exemptions performed significantly better than students with conditional or mature age exemptions or students without matriculation exemptions.

Diploma: Students with full matriculation exemptions were significantly more successful in graduating than others.

(j) Matriculation Aggregate:

Degree: Students with higher matriculation aggregates had significantly higher graduation rates than students with lower matriculation

aggregates.

Diploma: Students with better aggregates were significantly more successful in graduating than students with poorer aggregates.

Sex of Student: Among degree students with the same matriculation aggregate, females were significantly more successful in graduating than male students. No such differences existed for diploma students.

Full-Time, Part-Time: Graduation or drop-out among students with the same matriculation aggregate was not dependent on whether the student was full-time or part-time.

(k) Matriculation Symbols:

Total: Only Mathematics symbols in the matriculation examination had a significant bearing on graduation or drop-out.

Faculty: The subjects in which symbols were significantly related to graduation on a Faculty basis were:

English, History and Afrikaans for the Faculty of Arts; Physical Science and Biology for the Faculties of Commerce and Science; Mathematics for the Science Faculty only; Accountancy which was positively related to Commerce and negatively with Science (the only negative relationship); Physical Science for Commerce and Science. There were no significant predictors for Education and Law Faculties.

(l) Number of Courses Offered in First Year:

Students taking more courses in their first year were significantly more successful in graduating than students taking fewer courses in their first year.

(m) Number of Courses Failed:

Graduates failed significantly fewer courses than drop-outs in the



Faculties of Arts, Commerce and Education. In Law and Science the differences were not significant.

(n) Duly Performed Certificates Refused (Xdps)

Viewed on Faculty basis, degree students were granted full DP's as follows:

Education 65,6%; Science 62,0%; Arts 57,5%; Commerce 53,4%; Law 21,1%.

The differences in Xdps granted were significant among the five Faculties. Generally, graduates had better DP records than drop-outs, and Faculties with fewer DP refusals had higher graduation rates.

## CHAPTER ELEVEN

### CONCLUSIONS AND RECOMMENDATIONS

In this chapter conclusions are formulated which stem from the findings of the various chapters, and recommendations propounded for the attention of all concerned with higher education, especially for the South African Indian community.

#### 11.1 CONCLUSIONS

##### 11.1.1. Indian Matriculants, University Enrolments and Awards

While there has been an upward trend in the population growth of South African Indians for the period 1950-1977, as from 1972 there has also been evidence of a marked decline in the birth rate, a factor that could adversely affect university enrolment from 1990 onwards.

The South African Indian school population has shown a continuous positive growth over the period 1968-1978 but the standard ten enrolment has been distinctly erratic - showing positive growth in some years and negative in others. This fluctuation is disquieting for Indian education and is also of concern to the University of Durban-Westville as it affects the intake of students at the first-year level.

Another feature of school education affecting University enrolment adversely, is the small percentage (31,2%) of standard ten candidates passing with matriculation exemption. This figure compares unfavourably with the 46,6% for White pupils in South Africa. (The figures are for the period 1968-1978). Even more disturbing is the fact that only 20,2% of an age group from the Indian sector passed standard ten, compared with 87,2% for Whites in South Africa.

In spite of the restrictive factors mentioned above, the university enrolment of Indian students maintained an average annual growth rate of 11,3% over the period 1964-1978. However, the percentage of Indians at university is very low : in 1977, for example, only 0,6% of the total Indian population was at university compared to 1,7% for Whites.

Although the University of Durban-Westville was established primarily as an institution for Indian students, a high percentage of Indians still enrol with the University of South Africa. For instance, of the total number of Indian students enrolled for university education in 1978, 45% were with the University of Durban-Westville and 40% with the University of South Africa; while 15% were attending White residential universities in South Africa.

One of the reasons for the decline in the total enrolment was the marked drop in the number of part-time students when the University moved to the new campus in 1972. However, it is encouraging to note that as from 1977 there has been a significant increase in part-time enrolment.

It is encouraging to note that female enrolment at the University of Durban-Westville increased sharply from 23,4% in 1970 to 32,2% in 1978 but it is still lower than the 37,3% for female students at White universities.

The student-staff ratio of 1:15 at the University of Durban-Westville compares unfavourably with the ratio of 1:12 for White residential universities for the 1970's. Some Faculties at the University of Durban-Westville - Science (1:10) and Arts (1:13) - have had more favourable student-staff ratios than others, for example, Commerce (1:24) and to a lesser extent, Law (1:16).



While the University of Durban-Westville has been awarding the highest number of degrees to Indian candidates in South Africa, there has set in a decline in the percentage of such awards, even though student numbers have continued to grow. In 1970, for instance, 69,3% of the total number of awards to Indian candidates in South Africa were made by the University of Durban-Westville; but in 1978 the percentage had declined to 54,2%. On the other hand, the degree awards made by the University of South Africa to Indian candidates rose from 14,2% to 27,8%; and for Indian candidates at White residential universities from 16,5% to 18,0% over the same period.

#### 11.1.2. The Academic Productivity of the University of Durban-Westville

The academic performance of Indian students at the University of Durban-Westville has been lower than that of White students at White residential universities and Indian students at White residential universities. The mean pass rate for the period 1971-1976 at the University of Durban-Westville, was 53,8%; for White students at White residential universities it was 60,8%; for Indian students at White residential universities 57,9%.

The University of Durban-Westville also revealed an inability to cope with a heavy influx of new students. This was particularly evident in 1976 when a sharp increase in first-year enrolment resulted in a significant drop in the pass rates from 57,7% in the previous year to 52,5%. By contrast Indian students at White residential universities improved their corresponding pass rates from 59,6% to 62,9%.

The success rate at the University of Durban-Westville has been on the decline, especially from 1972 when it dropped below 50%, and it has remained below that figure. The mean graduation rate for 1961-1977 was 45,6% which is significantly lower than the 65% for White residential

universities for the period 1961-1975.

Like their counterparts at White universities female students at the University of Durban-Westville had a significantly higher success rate (44,0%) than male students (41,9%) for 1961-1977. The success rates at White universities for the period 1968-1971 was 72% for females and 65% for males.

Success rates and first-year enrolments at the University of Durban-Westville were found to be closely related : sharp increases in enrolment were accompanied by a considerable decline in the success rate, e.g., in 1969 when the growth rate was a high 58,2% the success rate fell to a low 40,4%. The opposite occurred in years when enrolment showed a sharp decline; for example, in 1968, when the growth rate was negative (-19,5%) the success rate was an impressive 78,6%. Similar findings were established for South African White residential universities by Erens and Louw (1978, 49) who came to the conclusion that "the university system is quite sensitive to the extent to which it is loaded and excessive growth constitutes a quite definite overload".

The success rates of female students displayed a greater sensitivity to changes in growth rates than those of male students. When success rates increased, those of females rose higher than those of males; and when success rates declined, those of females dropped lower.

The low success of 45,6% for the University of Durban-Westville was the result of the very low graduation rates of certain Faculties, for example, Law (18,5%) and Science (26,0%).

### 11.1.3. First-Year Examination Results from the Longitudinal Study : 1971-1976

Pass rates per subject differed considerably not only between Faculties, but also between subjects in the same Faculty. The large differences between Faculties is illustrated by the following mean subject pass rates :

Education 83,0%; Arts 60,4%; Commerce 55,1%; Law 48,2%; Science 47,6%.

The wide range in the pass rates within Faculties is illustrated by the following ranges in subject pass rates : Education subjects 40,0% to 92,7%; Arts subjects 31,7% to 84,2%; Commerce subjects 38,5% to 73,0%; Science subjects 39,7% to 60,6%.

The distributions of examination symbols differed significantly from Faculty to Faculty.

Further, while male students had better symbol distributions in the Faculties of Science and Commerce, female students were superior in Arts.

The granting of Duly Performed Certificates had a significant influence on first-year results. Only 54,4% of the candidates were granted full DP's. There were significant fluctuations in the first-year Xdps from year to year at the university. Completing the requirements for a pass at the first-year level continues to be a major hurdle.

First-year drop-out has been a major problem at the University of Durban-Westville with about a quarter of the first-year intake discontinuing their studies. Failure among first-year students was also high with only 46,2% passing first year at the first attempt.

Students who failed in the first year and who changed their courses of study in the succeeding year did not show greater success in their second attempt. For instance, 529 degree students changed courses and of these



only 26,1% passed. However, these students were more successful than those who repeated courses failed in the first year - only 21,4% of the latter passed.

#### 11.1.4. Graduates and Drop-Outs : 1971-1976

##### 11.1.4.1. Graduates

The largest number of degrees were awarded by the Faculties of Arts (37,8%), Commerce (27,3%), and Science (24,1%) respectively; while diploma awards were dominated by a single Faculty : Education, with 93,1%.

The graduation rate for the University of Durban-Westville was a very low 37,2%, mainly because of the low rates of the Faculties of Law (12,4%), Science (26,1%) and Commerce (33,0%).

The majority of students in the Science Faculty do not major in subjects taken at first-year level, i.e., Physics, Chemistry, Zoology and Botany. Passes in these courses would have made students eligible for admission to medical schools. Many of these students eventually settled for Bachelor of Science degrees with majors in microbiology, physiology and biochemistry.

The three dominant Commerce majors were: Accounting, Business Economics and Economics; while popular Law majors were: Private Law and Roman Law.

The majority of those who graduated (more than 60%) required more than the minimum number of years to get their degrees or diplomas. Large differences were found among Faculties with regard to the percentages graduating in the minimum number of years, ranging from 28,0% for Science to 52,3% for Education. Students at the other extreme, i.e., students taking three or more years than the minimum, were to be found in the Faculties of Commerce (33,8%), Science (30,8%) and Arts (24,2%).

#### 11.1.4.2. Drop-Outs

The drop-out rate at the University of Durban-Westville has been very high. More than half the students enrolling at the University dropped out before completing their degrees or diplomas. Of the 4120 first-year students 55,0% dropped out, significantly more than the 33% drop-out for White residential universities in South Africa. Another disturbing feature was that the drop-out rate at the University of Durban-Westville increased progressively - from 47,9% in 1971 to 57,3% in 1976. On the other hand White universities showed significant improvement - from 44% for 1955-1961 to 33% for 1969-1975.

Drop-out differed significantly from Faculty to Faculty ranging from 30,8% for Education to 75,8% for Law. The remaining Faculties had drop-out rates as follows: Science 68,0%; Commerce 56,2% and Arts 52,6%. These differences were significant. Full-time students were significantly less prone to drop-out than part-time while male students were significantly greater persisters than female.

A distinct pattern emerged from the drop-out rates. Drop-out, which was highest in the first year (54,4%), decreased in succeeding years by about 50% per year : 25,3% in the second year, 12,2% in the third; 5,5% in the fourth. If this were a consistent pattern, then a reduction of first-year drop-outs could reduce the final drop-out figure considerably. On a Faculty basis drop-out was also highest in the first-year, decreasing in succeeding years in all Faculties except Law, where the drop-out was highest in the second year. The Faculties of Law and Commerce had a greater percentage of delayed drop-out than the other Faculties.

Drop-out did not constitute total wastage because many students left the university with credits for courses passed. Two-thirds of the drop-outs

obtained one or more credits.

Considering the cost per student for 1971-1976 which averaged R1 250 per annum, the dropping out of 2268 students, of whom 45,6% spent more than one year at the university, does constitute substantial financial wastage.

#### 11.1.5. Factors Predicting Academic Success

A number of variables were found that predicted first-year success and graduation. Those factors that were found to be significant have been grouped into three principal categories: Institutional factors; Factors relating to the matriculation examination; Other student factors.

##### 11.1.5.1. Institutional Factors

Passing or failing at the first-year level of studies depended significantly on the Faculty in which the student had enrolled. Pass rates for degrees ranged from 33,4% for Science to 65,2% for Commerce. For diplomas the pass rates ranged from 26,8% for Arts to 60,9% for Education. Graduating from the University of Durban-Westville also depended significantly on the Faculty of study. Graduation rates ranged from 14,1% for Law to 50,6% for Education. Some Faculties, like Commerce and Law, were more successful in promoting their students from first year to second than in graduating them.

The semester system caused a significant decrease in the pass rates of most of the departments in which it was introduced. In Commerce, for example, the pass rate dropped sharply from 69,1% for the pre-semester years 1971-1975 to 46,5% for the semester year 1976.

An Xdp is a failure, and its incidence at the University of Durban-Westville was high. Over a 3-year period (1973-1975) not a single Faculty was able



to award more than 66% of its students full DPs. Significant differences were found among the five Faculties as regards the proportion of students awarded full DPs.

#### 11.1.5.2. Factors relating to the Matriculation Examination

The matriculation aggregate was a significant predictor of first-year success for degree students. Students with superior matriculation aggregates were significantly more successful than those with lower aggregates. Only students with a C aggregate or higher had the same probability of passing first year irrespective of the Faculty in which they studied.

The matriculation aggregate proved to be a significant predictor for graduation as well. On a Faculty basis the matriculation aggregate was a significant factor for graduation for degree students in two Faculties only : Commerce and Science.

Symbols for certain subjects taken for the matriculation examination had a significant predictive capacity for the total student body as far as first-year performance was concerned. Students with higher symbols in these subjects had a better chance of success in the first year than students with lower symbols. Highly significant predictors ( $p < 0,001$ ) included Physical Science and Accountancy while significant predictors included Biology and Mathematics. On a Faculty basis significant predictors of first-year success existed for 4 Faculties: Arts, Commerce, Law and Science.

For graduation, significant predictors were established on a Faculty basis for three Faculties only: Arts, Commerce and Science.

This research has revealed that students who took Accountancy, History and Physical Science at school level performed significantly better in Accountancy I, History I and Physics I/Chemistry I respectively at university than students who had not studied these subjects at school. The exception was Geography where no significant difference was found.

#### 11.1.5.3. Other Factors

Other student factors which served as predictors of success in university studies comprised home language, home province, age, commuter distance, sex of student, number of courses taken in first year and number of years taken to pass first year.

Gujerati and Memon are home languages that were significant predictors of both first-year success and graduation, while Urdu was significant for graduation only. Those sections of the Indian community that speak these languages generally belong to the upper levels of the socio-economic hierarchy. The advantages of an affluent home background contribute to the superior performance of students from these language groups.

Students from homes where English is spoken did significantly better than some others in the first-year examinations, but did significantly worse in graduation. To have English as a home language is an advantage in the first-year. Communication - English being the medium of instruction in most university subjects - is obviously a problem in the first year, but not in subsequent years.

While Transvaal students achieved significantly better results than those from Natal or the Cape Province in the first-year examinations, the situation changed at graduation where Natal students performed significantly better than the others. The fact that the university is situated in

Natal is an advantage to local students.

Younger degree students, that is, those up to 19 years of age, were significantly more successful in both the first-year examinations and graduation.

The distance travelled by students from their places of residence to university is a significant factor for first-year examination performance but not for graduation. The fact that commuter distance was not a significant factor for graduation means that it is a problem that is overcome after the first year of studies. The first-year student is clearly confronted by many problems to which he has to adjust.

While the sex of the student was not an important factor in the first-year examinations, it proved to be significant for graduation. Female degree students were significantly more successful than males. On a Faculty basis females had a significantly better graduation rate than males for three Faculties only: Arts, Education and Science.

Students taking more than four courses in their first year were significantly more successful both in the first-year examination and in graduation than those taking fewer. It is obvious that the brighter students enrol for more courses.

Passing the first-year examinations at the first attempt is an important indicator of graduation.

This research has shown that the majority of graduates (70,9%) took one year only to pass the first year-examinations.



## 11.2. RECOMMENDATIONS

The academic productivity of the University of Durban-Westville can be improved by the concerted efforts of all those involved : administrative and academic staff, students, parents, schools, employers and the State.

The recommendations proposed here, based chiefly on the findings of this research, pertain to: immediate remedial action programmes, ongoing research at the University, examinations, selection criteria, teaching staff, students, parents, schools, the public and private sectors, and the State.

### 11.2.1. A University Senate Committee to Tackle Problems Raised by this Research

A drop-out rate of 55,0% and a first-year failure rate of 53,8% provide clear evidence of serious academic wastage at the University. And since the situation has been worsening there is an urgent need for immediate remedial action by the University. It is strongly recommended that a University Senate Committee be appointed as soon as possible to assist Faculties and departments to tackle the problems related to failure and drop-out.

### 11.2.2. A University Research Unit

It is obvious that the activities of a University Senate Committee (11.2.1) would be ongoing and it would need professional assistance with its action programmes. A University Research Unit is an urgent requisite to provide such expertise. Preferably it should be independent of any department of the university, and its staff should devote themselves primarily to investigation and research. The Research Unit should be headed by a senior educationist well versed in statistics,

research design and methodology related to student achievement. The computer facilities at the university would be of considerable assistance to such a Unit. Some South African White universities already have such units in operation. The HSRC (1981, 54) investigation into education emphasized the importance of research when it said "education is a dynamic process and if it is to maintain a sensitive, relevant response to new needs and changed circumstances, continuing research and development will be imperative".

### 11.2.3. Examinations and other Academic Assessment Procedures

#### 11.2.3.1. The Semester System

A drop of 22,6% in the first-year pass rate from 69,1% in 1975 to 46,5% in 1976 in one Faculty (Commerce) as a result of the introduction of the semester system, is disastrous. In fact, the semester system resulted in lower pass rates in almost all those departments that employed it in 1976. It is apparent that many first-year students cannot cope with formal examinations in the first semester of the first year in addition to the numerous transition problems they experience.

It is recommended therefore that, unless evidence is forthcoming that the semester system results of first-year students have recovered to pre-semester pass rate levels, the semester system should be abandoned - certainly for first-year students - and the university should revert to end-of-year examinations.

#### 11.2.3.2. Duly Performed (DP) Certificates

This research has confirmed findings elsewhere that first-year students have numerous problems relating to transition and adjustment. The high

incidence of Xdps is further evidence of these problems : only 54,4% of first-year students obtained maximum DP's.

It is strongly recommended that the DP percentage be reduced from 40% to 30%. The student will then have a chance to prove himself in the examinations. If the semester system is retained for first-year students, then there should be no DP's for them in the first semester. Only the examination mark should be taken into account.

DP refusals differed significantly, not only from Faculty to Faculty, but also from department to department in the same Faculty. This gives cause for concern. It is advocated that these variations be investigated (by the University Research Unit).

#### 11.2.3.3. First-Year Pass Requirements

The University's major responsibility is to prepare its students for graduation. This research has substantiated findings in South Africa and overseas that the first year of studies is the most difficult for the student. In addition to the problems created by academic demands, he faces a variety of others. The writer strongly urges that the University of Durban-Westville should reduce the minimum requirements for passing first year from three courses to two - as is the case with the Commerce Faculty.

White South African universities have already changed their criteria for defining a first-year failure. Some universities regard as failures only those students who have failed all subjects (Erens, 1977, 10; Erens and Louw, 1978, 44).

The van Wyk de Vries Commission (1974, 229) suggested that the first-year at university be made not very difficult, to assist students in



overcoming their first-year problems; a higher standard in subsequent years could ensure the desired standard of the degree is maintained. Such a move would have a positive effect on students.

This research has shown that passing first year at the first attempt motivates students to graduate.

#### 11.2.3.4. Variety, Flexibility and Continuity of Assessment

The importance attached to examination results at universities means that there is a heavy responsibility for those who set examinations. Maintaining inflexible departmental standards in respect of assessment procedures is unsound. Examiners are urged to show greater academic flexibility by providing, where possible different types of examinations and questions. To get a more reliable picture of a student's achievement, lecturers/examiners should combine, if feasible, the results of a variety of testing techniques, *inter alia*, theoretical, practical, essay, short questions, open-book, objective type, oral.

Another recommendation is that of continuous assessment where students are judged on a number of occasions - by assignments, tests, examinations - and not on a single one. Students are known to prefer such a testing arrangement which lecturers are requested to explore.

#### 11.2.4. Selection Criteria

This research has proved that the matriculation aggregate is a significant predictor of success and the following recommendation is made: Students with E<sup>+</sup> aggregates are advised against pursuing Science or Commerce degrees because D or C or higher aggregate ensured significantly greater success in these Faculties than an E<sup>+</sup> aggregate.

An important finding in this investigation was that for certain Faculties certain matriculation subjects significantly predicted success at first-year level as well as at graduation. These Faculties should, in addition to existing selection criteria, also take cognizance of these subject predictors when enrolling first-year students.

#### 11.2.5. Students at the University of Durban-Westville

Students should be assisted by the University to adapt to the institution. The transition from school to university is accompanied by adjustment problems. The most pressing problem for first-year students is work-related. The abrupt changes in teaching and learning styles between school and university tend to diminish the academic competence of most students. First-year students need more information on the academic content of subjects and the nature of university study. Many of these problems could be handled partly by effective orientation or academic support programmes, and efficient counselling services.

##### 11.2.5.1. Orientation or Academic Support Programmes for First-Year Students

To be effective, orientation programmes must be conducted on a subject basis by the subject lecturer. A general orientation week followed by moving straight into a heavily time-tabled ongoing pattern of work with little or no opportunity for personal contact between staff and students, does little to establish the new student's confidence. Orientation programmes should be structured in such a way that orientation activities help students to get to know themselves and members of staff; offer early diagnosis of student problems, provide assistance in study methods, and clarify the aims and objectives of the courses. Research evidence on

success, failure and drop-out should also be made available to students.

An alternative or a supplement to the orientation programme outlined above is the "Academic Support Programme" for first-year students, as is being offered at some White universities in South Africa. These special programmes are for "disadvantaged" students, especially non-Whites, who need help to bridge the gap between school and university. These 3- or 4-week programmes at the beginning of each year offer, *inter alia*, bridging courses and reading and study skills prior to the commencement of the academic year.

#### 11.2.5.2. Counselling Services

First-year students and their parents require to be guided by professional counselling services.

There is much parental pressure on students to go to university. Quite often a student's first choice of courses or field of study could have been more realistic if it had been based on the advice of professional people.

The University of Durban-Westville should provide a combined professional counselling and psychological service that includes psychotherapy; and counselling relating to vocational guidance, study methods and other study problems.

#### 11.2.6. Lecturing Staff of University of Durban-Westville

This research revealed that sharp increases in first-year enrolments were accompanied by equally sharp declines in the success rates; while declines in enrolment resulted in increases in success rates. It would appear that large groups constitute a challenge to lecturing



techniques that staff are not able to meet. Clearly, teaching to smaller groups is one answer to this problem. The value of teaching in small groups has been fully recognised (Abercrombie, 1972, 118).

If large student groups are to be broken into smaller ones and if the lecture loads of existing staff are not to be increased unduly, then more staff will be needed. However, this research has established that the University of Durban-Westville needs more teaching staff to make its student-staff ratio comparable to that of White universities : 84 more teaching staff to be on equal terms. There is therefore, a strong case for more staff at the University of Durban-Westville.

The formal lectures which predominate have a place in university teaching. However, they must be supplemented by other methods. It is imperative in this technological era that lecturers enhance their presentation wherever possible with the aid, *inter alia*, of programmed texts, overhead projectors, printed material, worksheets, video tapes, film loops and closed-circuit television.

As stated above, there is some lack of clarity among some lecturers about the place of the lecture, seminar, tutorial, small group lectures and the values of different kinds of audio-visual aids in lectures. University staff are selected mainly for their scholarship; few of them (Faculty of Education excluded) have had any training in methods of teaching. There is a clear need, therefore, for a course in Didactics especially for new members of staff. They should be initiated into such matters as defining teaching objectives, student-lecturer rapport, styles of presentation, structuring of lectures, use of new media, and assessment.

Students in South African universities have complained of lecturers who are not easy to contact and of the indifference shown to them by some members of the lecturing staff. Viljoen (1978, 234) - now Minister of National Education - said bluntly " ..... unless a member of the university staff really likes young people, really has a sense of warmth, affinity and empathy for young people, he shouldn't be on the job". In view of the above findings and statements it is strongly recommended that the attitudes, availability and reactions of staff to students and student problems be researched so that improvements can be attempted in the best interests of not only the student but also of the staff and the university. There is a need among students for support and understanding from persons older and wiser than themselves. They should not be denied this.

#### 11.2.7. Recommendations at School Level

The fourth phase of the differentiated 4- phase school education has high potential for laying useful foundations for university study. The success in graduation of Commerce Faculty students who had excelled in Accountancy at school; of Arts Faculty students who had done well in English, History and Afrikaans at school; of Science Faculty students who had excelled in Mathematics, Physical Science and Biology at school, is encouraging evidence that the present system of school education, in particular the fourth phase, with its fields of study which include Science, Humanities, Commerce, Technical, can be expected to make a significant contribution to improved academic performance in university Faculties. A strong appeal is made to the educational authorities at school level to maximise this potential by improving educational facilities at school; and, in particular, the quality of instruction at the senior secondary level. Better qualified teachers and further training of teachers (in service) are urgently needed to maximise the advantages of the system.



It is also recommended that educational facilities at school level for Indians be raised to match those accorded to Whites. This will alleviate some of the major shortcomings of Indian education. The Teacher's Association of South Africa (TASA, 1982) listed some of them: the undesirable platoon (double-shift) system, insufficient subject rooms and resource centres, low per capita pupil allowance, unfavourable pupil-staff ratios, the large number of unqualified teachers, heavy teaching loads, inadequate sports facilities.

#### 11.2.8. The Technikon as an Alternative to University

Parents, students and employers are exhorted to assist in a proper distribution of man-power potential by not pressing too hard for children to attend university, and to be sympathetic to technikons and other alternatives to universities. The College of Education has a ceiling to its intake but the technikon has been under-utilized.

It is recommended, therefore, that school guidance officers and educationists "sell" the concept of technikons to parents and pupils. Not only will this help to reduce failure and drop-out at university but it will also be a positive step towards meeting the man-power demands of the country and concurrently the elevation of the economic well-being of the community.

#### 11.2.9. Research to Sound Out Students, Lecturers, Teachers and Parents on Success, Failure and Drop-out at University

It is strongly recommended that this research be complemented by others where the people involved - directly and indirectly - in success, failure and drop-out at university, are subjected to interviews and surveys. Oral and written response is required from students and staff at



university, from teachers at schools and from parents.

Students should be asked to report on their experiences and problems at university. Sanford (1962, 627) reported that two-thirds of drop-outs left for non-academic reasons: social, psychological, financial and others. Drop-outs reported fear of examinations, learning and writing blocks, feeling of inadequacy, hypersensitivity (Pervin, *et al.*, 1966, 244). Students are the principal concern of a university and they must be listened to and helped.

Lecturing staff should be given opportunities to reply to accusations generally levelled against them, some of which are: poor teaching strategies, poor assessment techniques, insufficient information on course work, lecturers are more subject orientated than person orientated, teaching staff place greater emphasis on research and publishing than on improving their teaching.

It is unfair to put all the blame on the school for the poor performance of students in their first year at university. High school teachers who prepare students for the matriculation examination have their hands full as a result of the rigour of the matriculation examination. Teachers and lecturers share the responsibility of bridging the first-year gap at the university. It would be a constructive exercise, therefore, to get the view-points of teachers at school on this problem. They can also reply to some of the criticisms levelled at the school : poor preparation of students for university as a result of spoon-feeding, cramming, less emphasis on critical and creative thinking, oppressive authoritarianism.

Parents are an important group that should participate in the student problem probe. Indian parents should seriously consider forming a Parents' Association like the Transvaal Afrikaans Parents' Association

formed in November 1982. Its chairman, Professor Stone of Unisa, said the organisation was formed in view of the new parental involvement in education that is envisaged by the HSRC (1982, 14) investigation into education. Its functions involved informing and guiding its members and expressing the community's wishes in discussions with educational authorities at provincial and national level and with teacher's associations. The three English-speaking teachers' organisations have decided that English-speaking parents should follow the lead given by the Afrikaans community.

#### 11.2.10. Recommendations at a National level

The statutes should be amended to enable the University of Durban-Westville to become a full member of the CUP. Not only will this benefit the University immediately through the valuable investigations conducted by the CUP on university issues, but it will also avoid unnecessary duplication of research. The research expertise of the CUP and its secretariat would be an advantage to the University of Durban-Westville.

White students have 11 residential universities to choose from. These are found in every province, some provinces having as many as four. Indians have only one university and this is situated in Durban. This siting is of advantage to Natal Indians, not to those in other provinces. This research has shown that the percentage of the White population at university is three times greater than that for Indians. This retarding effect on university enrolment can be remedied if Indians are free to enter a university near their home or in their province.

The appeal already made by rectors of English- and Afrikaans-medium universities for open universities would, if heeded, be of benefit not only to the universities - in terms of increased government subsidies - but to the Indian community - in increased Indian student enrolment at

university level. Benefit would also accrue to the country - in increased skilled manpower.

To enable the University of Durban-Westville to offer a full range of courses of study, it is necessary for the Government to remove from the statutes all legislation that discriminates against the Indian in the employment spheres on the basis of race. White universities will not be able to provide all the manpower requirements of the country. Therefore, the non-White universities have an important role to play in the future development of South Africa.

Numerous cases have been reported of non-Whites being overlooked for positions for which they qualified and which were not affected by legislation. Such attitudes and practices are not only detrimental to the educated Indian but are also contrary to the spirit of a large number of Whites in the country, including some Cabinet Ministers and Members of the Government. An appeal is made for those in responsible positions in the private sectors to remove from their systems all racial bias so that Indian graduates can look forward with confidence to finding employment matching their qualifications.

Research elsewhere has shown conclusively that drop-out at university is related to socio-economic status. In this research students from homes where Gujerati, Memon and Urdu are spoken - these language groups represent the more affluent sectors of the community - were more successful in graduating than others. More than 50% of Indian families are poor and in need of housing assistance (Butler-Adam and Venter, 1982). One significant way of improving this situation is the removal of discrimination in pay both in the private and public sectors. Some welcome moves in this direction have already been made but many more employers should do so.



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APPENDIX 1

THE  $\chi^2$  STATISTICS

$\chi^2$  is a measure of the discrepancies between observed and expected frequencies (Freund and Williams, 1977, 330).

Observed frequencies are obtained empirically, by observation or experiment; while theoretical or expected frequencies are generated on the basis of some hypothesis or line of theoretical speculation, which is independent of data on hand (Ferguson, 1966, 191). Expected cell frequencies are those which would exist if there were no associations or relationships between the variables (Mc Nemar, 1962, 199). The  $\chi^2$  test of independence determines whether variables are independent of each other or related.

The requirements for  $\chi^2$  are:

- (a) data must be independent
- (b) the categories are mutually exclusive
- (c) all data must be used.

$$\chi^2 \text{ is defined as } \chi^2 = \sum \frac{(o-e)^2}{e}, \text{ i.e.,}$$

the sum of the squared discrepancies between observed and expected frequencies, each divided by the expected frequency (McNemar, 1961, 209).

Most of the tables in this research were large (greater than 2x2) and  $\chi^2$  was calculated by a Univac 90/30 computer using the above formula.

A formula which avoids the computation of the expected frequencies in a 2x2 table is

$$\chi^2 = \frac{N [ad - bc]^2}{k1mn}$$

which is a well-known formula (Downie and Heath, 1970, 201).

Small expected frequencies may cause the actual sampling distribution of  $\chi^2$  to exhibit marked discontinuity (Mc Nemar, 1961, 217; Ferguson, 1966, 206). For one degree of freedom, Yates correction for continuity is recommended if any expected frequency is less than 5 (Ferguson, 1966, 207; Edwards, 1967, 333). McNemar (1962, 226) advocated the use of Yates's correction for degrees of freedom equal to 1 when expected frequencies are between  $\frac{5}{2}$  and 10. Mc Nemar is supported by Lordahl (1967, 202) who says that  $\chi^2$  is suspect if any one expected frequency is less than 5. Downie and Heath (1970, 202) recommended Yates's correction if expected frequencies are less than 10, but do not state a lower limit when degrees of freedom equal one. The observed value may be zero or any other number (Lordahl, 1967, 202).

Yates's Correction formula is

$$\chi^2 = \sum \frac{(|o - e|)^2}{e} \text{ or } \frac{N [ |ad - bc| - \frac{N}{2} ]^2}{k1mn} \text{ in a 2x2 table}$$



Lordahl (1976, 203) and Downie and Heath (1970, 202) are critical of Yates's correction. They claim that it overcorrects and recommend instead a correction formula devised by Pirrie and Hamden.

However, in this research Yates's correction was applied when necessary. Most of the  $\chi^2$  tests involving one degree of freedom contained large frequencies. In a small minority of cases where expected frequencies were less than 10, Yates's correction was applied for degree of freedom equal to 1.

Yates's correction is not applied to tables with degrees of freedom greater than one (Downie and Heath, 1970, 208). Most of the  $\chi^2$  calculations in this research involved tables with degrees of freedom greater than one. With 2 or more degrees of freedom, errors introduced by small frequencies are of less consequence than with one degree of freedom (Mc Nemar, 1961, 218; Ferguson, 1966, 207).

Edwards (1967, 334) refers to the work of Lewontin and Felsenstein who investigated the distribution of  $\chi^2$  and found that the test was remarkably robust for large tables (degrees of freedom greater than 1) provided that all the expected numbers were equal to or greater than 1.

Cognizance was taken of the following recommended procedure in the computation of  $\chi^2$  for degrees of freedom greater than one:

Frequencies may be combined where small frequencies occurred at the tails of distributions. (Ferguson, 1966, 208; Downie and Heath, 1970, 207).



APPENDIX 2

## INDIAN POPULATION OF SOUTH AFRICA : 1950 - 1978

YEAR	TOTAL	% GROWTH	MALE	FEMALE
1950	351 000	-	182 000	169 000
1951	368 000	4,8	190 000	178 000
1952	379 000	3,0	195 000	184 000
1953	391 000	3,2	201 000	190 000
1954	404 000	3,3	207 000	197 000
1955	417 000	3,2	213 000	204 000
1956	429 000	2,9	219 000	210 000
1957	440 000	2,6	224 000	216 000
1958	452 000	2,7	230 000	222 000
1959	463 000	2,4	235 000	228 000
1960	476 000	2,8	241 000	235 000
1961	488 000	2,5	247 000	241 000
1962	502 000	2,9	254 000	248 000
1963	515 000	2,6	260 000	255 000
1964	528 000	2,5	266 000	262 000
1965	544 000	3,0	274 000	270 000
1966	561 000	3,1	283 000	278 000
1967	578 000	3,0	291 000	287 000
1968	594 000	2,8	299 000	295 000
1969	614 000	3,4	308 000	306 000
1970	633 000	3,1	315 000	318 000
1971	650 000	2,7	323 000	327 000
1972	674 000	3,7	335 000	339 000
1973	691 000	2,5	343 000	348 000
1974	709 000	2,6	352 000	357 000
1975	727 000	2,5	361 000	366 000
1976	744 000	2,3	369 000	375 000
1977	762 000	2,4	377 000	385 000
1978	778 000	2,1	384 000	394 000

Sources : a) Reports on Births : 1965, 1973, 1977; Department of Statistics, Pretoria.

b) Bulletin of Statistics : 1980; Pretoria.

## TOTAL INDIAN BIRTHS : 1948 - 1977

YEAR	TOTAL	% GROWTH	MALE	FEMALE
1948	12406	1,6	6333	6073
1949	12361	-0,3	6327	6034
1950	13384	8,2	6786	6598
1951	13014	-2,8	6498	6516
1952	13155	1,1	6577	6578
1953	13527	2,8	6802	6725
1954	13877	2,6	6917	6960
1955	14197	2,3	7092	7105
1956	13136	-7,5	6619	6517
1957	13486	2,7	6803	6683
1958	13600	0,8	6935	6665
1959	15002	0,3	7719	7283
1960	14120	-5,9	7129	6991
1961	14548	3,0	7341	7207
1962	14918	2,5	7521	7397
1963	15417	3,3	7723	7694
1964	16636	7,9	8421	8215
1965	17244	3,7	8709	8535
1966	17477	1,4	8645	8832
1967	17236	-1,4	8607	8629
1968	18815	9,2	9397	9418
1969	21116	2,2	10558	10558
1970	21082	-0,2	10723	10359
1971	22129	5,0	11359	10770
1972	22462	1,5	11356	11106
1973	22158	-1,4	11150	11008
1974	20946	-5,5	10586	10360
1975	20298	-3,1	10251	10047
1976	19785	-2,5	9949	9836
1977	18881	-4,6	9547	9334

Sources : a) Reports on Births : 1965, 1973, 1977; Department of Statistics, Pretoria.

b) Bulletin of Statistics : 1980; Pretoria.

## APPENDIX 4

DISTRIBUTION OF STUDENTS AT UNIVERSITY OF DURBAN-WESTVILLE FOR 1961 - 1980 :  
 FULL-TIME, PART-TIME, MALE, FEMALE

YEAR	TOTAL	FULL-TIME						PART-TIME					
		Total	Male		Female		Total	Male		Female			
			No.	%	No.	%		No.	%	No.	%		
1961	114	103	92	89,3	11	10,7	11	11	100,0	0	0,0		
1962	433	311	276	88,7	35	11,3	122	117	95,9	5	4,1		
1963	614	417	363	87,1	54	12,9	197	169	85,8	28	14,2		
1964	847	564	488	86,5	76	13,5	283	255	90,1	28	9,9		
1965	973	661	546	82,6	115	17,4	312	285	91,3	27	8,7		
1966	1129	745	595	79,9	150	20,1	384	339	88,3	45	11,7		
1967	1258	812	618	76,1	194	23,9	446	392	87,9	54	12,1		
1968	1407	909	687	75,6	222	24,4	498	430	86,3	68	13,7		
1969	1621	1070	811	75,8	259	24,2	551	462	83,8	89	16,2		
1970	1654	1107	805	72,7	302	27,3	547	462	84,5	85	15,5		
1971	1710	1110	799	72,0	311	28,0	600	514	85,7	86	14,3		
1972	2003	1492	1048	70,2	444	29,8	511	425	83,2	86	16,8		
1973	2192	1725	1215	70,4	510	29,6	467	386	82,7	81	17,3		
1974	2342	1978	1336	67,5	642	32,5	364	305	83,8	59	16,2		
1975	2674	2229	1503	67,4	726	32,6	445	377	84,7	68	15,3		
1976	3124	2675	1773	66,3	902	33,7	449	370	82,4	79	17,6		
1977	3522	2970	1978	66,6	992	33,4	552	459	83,2	93	16,8		
1978	4201	3467	2242	64,7	1225	35,3	734	566	77,1	168	22,9		
1979	4652	3698	2373	64,2	1325	35,8	954	709	74,3	245	25,7		
1980	5003	3763	2322	61,7	1441	38,3	1240	909	73,3	331	26,7		



APPENDIX 5

FIRST-YEAR PASS RATES (%) AT WHITE RESIDENTIAL UNIVERSITIES : 1959 - 1967

UNIVERSITY	PASS RATES (%)								
	1959	1960	1961	1962	1963	1964	1965	1966	1967
Orange Free State	76	73	85	80	75	83	75	68	70
Potchefstroom	77	70	61	66	68	72	67	70	73
Pretoria	50	57	55	57	53	50	55	54	56
Stellenbosch	65	68	70	70	70	70	66	66	63
Cape Town	62	60	57	67	57	57	54	63	67
Natal	63	51	60	58	59	58	61	65	55
Rhodes	63	70	63	60	65	71	73	68	68
Witwatersrand	54	55	53	53	50	64	62	65	60
Port Elizabeth	-	-	-	-	-	-	50	58	72
All Universities	60	61	60	61	59	61	61	63	61

Source : (Erens and Louw, 1978, 43).

APPENDIX C

NUMBER OF DEGREES, DIPLOMAS/CERTIFICATES AWARDED 2; 3; 4; 5; AND 6 YEARS AFTER REGISTRATION OF  
NEW FIRST-YEAR STUDENTS : 1961 - 1977

YEAR	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977
New First-Years	114	366	372	431	389	325	395	318	503	403	429	625	649	821	854	1187	1142
	N	U	M	B	E	R		O	F		A	W	A	R	D	S	
Diplomas at 2 Years				1	68	49	61	41	40	19	4	9	13	17	14	15	18
Diplomas at 3 Years	1	20	20	30	21	24	31	57	32	37	50	40	36	39	77	96	85
Diplomas at 5 Years								1	4	11	14	14	14	25	11	10	9
Total Diplomas	1	20	20	31	89	73	92	99	76	67	68	63	63	81	102	121	112
Degrees at 3 Years	9	24	62	74	99	107	141	136	110	143	164	195	194	217	226	252	291
Degrees at 4 Years		1	1	2	-	-	1	6	5	16	20	39	52	55	84	100	108
Degrees at 5 Years			2	2	6	11	16	9	12	20	6	-	1	-	-	7	8
Degrees at 6 Years										1	-	4	5	1	4	11	16
Total Degrees	9	25	65	78	105	118	158	151	127	180	190	238	252	273	314	370	423
Total : Degrees & Diplomas	10	45	85	109	194	191	250	250	203	247	258	301	315	354	416	491	535
Success Rate (%)	9	12	23	25	50	59	63	79	40	61	60	48	49	43	49	41	47
<u>MALE STUDENTS</u>																	
Male New First-Years	103	335	312	357	326	247	294	236	385	281	318	438	451	552	599	797	774
Male Degrees & Diplomas	9	34	71	96	158	157	192	174	157	186	181	223	211	235	267	316	330
Success Rate (%)	9	10	23	27	48	64	65	74	41	66	57	51	47	43	45	40	43
<u>FEMALE STUDENTS</u>																	
Female New First-Years	11	31	60	74	63	78	101	82	118	122	111	187	198	269	255	390	368
Female Degrees & Diplomas	1	11	14	13	36	34	58	76	46	61	77	78	104	119	149	175	205
Success Rate (%)	9	35	23	18	57	44	57	93	39	50	69	42	53	44	58	45	56
White Success Rate (%)					60	59	69	68	75	62	66	65	65	62	68	-	-

APPENDIX . 7 A

FIRST-YEAR RESULTS PER SUBJECT IN THE FACULTY OF ARTS : 1971 - 1976

SUBJECT	S Y M B O L S									PASS GROUP		FAIL GROUP
	A 75-100 %	B 70-74 %	C 60-69 %	D 50-59 %	E <sup>+</sup> 45-49 %	E 40-44%	<E <40 %	Xdp's	Total	No.	%	No.
Special Afrikaans	0	0	1	0	0	0	0	0	1	1	100	0
Gujerati	0	1	0	0	0	0	0	0	1	1	100	0
Hindi, Tamil, Telegu (+ Special)	3	5	18	6	0	0	0	0	32	32	100	0
Islamic Studies	5	6	8	5	0	1	0	0	25	24	96	1
Logopaedics	0	3	5	0	0	1	0	0	9	8	88,9	1
Speech Science	0	0	4	2	0	1	0	0	7	6	85,7	1
Special English	1	5	10	32	4	2	1	2	57	48	84,2	9
Speech & Drama, Comm- unication	0	1	24	56	6	2	2	7	98	81	82,7	17
Missiology & Eleatics	2	0	3	3	1	1	0	0	10	8	80	2
Practical English	2	4	104	706	110	41	12	43	1022	816	79,8	206
Social Work	1	2	24	53	12	4	1	4	101	80	79,2	21
Biblical Studies	0	1	3	6	1	0	2	0	13	10	76,9	3
Science of Religion	3	3	5	5	2	0	2	1	21	16	76,2	5
Anthropology	1	0	18	25	3	4	7	2	60	44	73,3	16
General Church History	1	1	2	4	0	2	0	1	11	8	72,7	3
Practical Theology and Systematic Theology	0	0	4	4	1	0	1	1	11	8	72,7	3
Sociology	2	0	50	102	13	15	16	16	214	154	72	60
Classical Hebrew, Greek	2	0	8	5	0	3	3	0	21	15	71,4	6
Oriental Studies	0	3	23	56	15	8	7	4	116	82	70,7	34
History of Art	0	0	5	2	0	1	0	2	10	7	70	3
Philosophy	1	0	24	79	9	10	15	11	149	104	69,8	45
Psychology	2	10	88	170	41	38	29	9	387	270	69,8	117
Arabic, Urdu, (+ Special)	3	4	4	9	2	4	2	3	31	20	64,5	11



APPENDIX 7 A (CONTINUED)

SUBJECT	S Y M B O L S									PASS GROUP		FAIL GROUP
	A 75-100 %	B 70-74 %	C 60-69 %	D 50-59 %	E <sup>+</sup> 45-49 %	E 40-44 %	<E <40 %	Xdp's	Total	No.	%	No.
English	0	1	41	404	95	77	59	32	709	446	62,9	263
Criminology	0	0	6	95	13	12	33	6	165	101	61,2	64
Library Science	0	0	0	3	0	1	1	0	5	3	60	2
Physical Education	1	0	6	37	12	11	5	2	74	44	59,5	30
Indology and Sanskrit	1	0	1	2	0	1	1	1	7	4	57,1	3
Special French	0	1	0	7	0	1	3	2	14	8	57,1	6
Painting	0	0	6	21	5	5	9	2	48	27	56,3	21
Design	0	1	5	21	12	6	3	3	51	27	52,9	24
History	0	0	14	136	42	32	43	19	286	150	52,4	136
Practical Afrikaans	5	7	68	155	38	43	66	73	455	235	51,6	220
Art	2	2	9	19	6	14	6	5	63	32	50,8	31
Geography	1	5	14	50	14	27	32	2	145	70	48,3	75
Political Science	0	0	12	42	5	4	50	1	114	54	47,4	60
Afrikaans - Nigerianus	0	1	12	11	4	7	16	6	57	24	42,1	33
Anatomy	1	0	4	1	2	2	2	4	16	6	37,5	10
Latin	0	0	7	29	7	16	26	11	96	36	37,5	60
Special Latin	5	4	26	41	15	17	35	97	240	76	31,7	164
Appreciation and Introduction to Art	0	0	4	6	1	2	16	3	32	10	31,3	22

APPENDIX 7 B

FIRST-YEAR RESULTS PER SUBJECT IN THE FACULTY OF COMMERCE : 1971 - 1976

Public Administration	2	1	14	37	3	2	13	2	74	54	73	20
Economics	4	1	132	561	61	56	166	21	1002	698	69,7	304
Industrial Psychology	0	2	8	11	1	1	9	0	32	21	65,6	11
Business Economics	3	6	133	349	68	74	180	57	870	491	56,4	379
Mathematical Studies	1	0	1	3	0	3	1	1	10	5	50	5
Accounting	28	44	138	285	42	75	351	59	1022	495	48,4	527
Statistics	17	16	79	127	21	39	167	154	620	239	38,5	36,6

APPENDIX 7 C

FIRST-YEAR RESULTS PER SUBJECT IN THE FACULTY OF EDUCATION : 1971 - 1976

SUBJECT	S Y M B O L S									PASS GROUP		FAIL GROUP
	A 75-100 %	B 70-74%	C 60-69 %	D 50-59 %	E <sup>+</sup> 45-49 %	E 40-44 %	<E < 40 %	Xdp's	Total	No.	%	No.
<u>(DEGREE)</u>												
Cloth & Interior Design	0	1	0	3	0	0	1	0	5	4	80	1
Home Management	0	0	2	2	0	0	1	0	5	4	80	1
Education	2	0	54	159	44	23	14	6	302	215	71,2	87
Afrikaans Elementer	5	2	7	20	3	8	5	6	56	34	60,7	22
Physical Science	0	0	0	4	0	3	6	2	15	4	26,7	11
Biology	0	0	2	4	4	2	4	9	25	6	24	19
<u>(DIPLOMA)</u>												
Speech and Drama	0	1	18	22	0	0	0	0	41	41	100	0
Physical Education	4	16	38	132	8	2	1	8	259	240	92,7	19
History	0	3	22	73	4	3	1	0	106	98	92,5	8
Accounting	9	11	31	25	3	2	2	0	83	76	91,6	7
Education	4	9	69	229	9	18	5	0	343	311	90,7	32
Art	2	2	4	31	4	2	0	0	55	49	89,1	6
English	5	18	101	175	18	13	10	0	340	299	87,9	41
Afrikaans	4	9	89	192	22	8	12	0	336	294	87,5	42
Business Economics	3	7	13	25	3	2	2	0	55	48	87,3	7
Music	2	5	12	17	2	1	0	3	42	36	85,7	6
Economics	1	0	2	7	1	1	0	0	12	10	83,3	2
Commercial Mathematics	1	0	4	8	1	2	0	0	16	13	81,2	3
Home Economics	1	0	0	3	0	0	0	1	5	4	80	1
Geography	0	1	17	51	4	10	6	2	91	69	75,8	22

APPENDIX 7 C (CONTINUED)

SUBJECT	S Y M B O L S									PASS GROUP		FAIL GROUP
	A 75-100 %	B 70-74 %	C 60-69 %	D 50-59 %	E <sup>+</sup> 45-49 %	E 40-44 %	< E < 40 %	xdp's	Total	No.	%	No.
Cloth, Needlework and Interior Design	0	0	4	10	2	2	1	0	19	14	73,7	5
Food, Nutrition and Home Management	0	1	2	11	2	3	2	0	21	14	66,7	7
Mathematics	5	4	14	23	6	4	13	3	72	46	63,9	26
Latin	0	0	0	3	0	1	0	1	5	3	60	2
Physical Science	0	1	7	19	5	4	14	1	51	27	52,9	24
Biology	0	0	2	18	10	6	12	2	50	20	40	30

APPENDIX 7 D

FIRST-YEAR RESULTS PER SUBJECT IN THE FACULTY OF LAW : 1971 - 1976

Administration of Estates and Interpretation of Statutes	0	0	0	2	0	0	0	0	2	2	100	0
Constitutional Law, Commercial Law	0	3	4	1	0	0	0	2	10	8	80	2
Private Law	6	4	42	150	76	48	42	62	440	212	48,2	228
Law of Public Administration	0	0	0	3	4	2	2	3	14	3	21,4	11

APPENDIX 7 E

FIRST-YEAR RESULTS PER SUBJECT IN THE FACULTY OF SCIENCE : 1971 - 1976

Science

Technical Drawing	0	0	1	2	0	0	0	1	4	3	75	1
Physics IB	37	41	148	358	60	100	91	129	964	584	60,6	380



APPENDIX 7 E (CONTINUED)

SUBJECT	S Y M B O L S									PASS GROUP		FAIL GROUP
	A 75-100 %	B 70-74 %	C 60-69 %	D 50-59 %	E <sup>+</sup> 45-49 %	E 40-44 %	<E <40 %	Xup's	Total	No.	%	No.
Engineering Mathematics	12	5	12	19	4	8	14	15	89	48	53,9	41
Statics, Dynamics and Mechanics	6	2	10	23	1	5	21	9	77	41	53,2	36
Applied Mathematics	6	2	9	8	1	2	17	3	48	25	52,1	21
Chemistry	23	32	134	296	104	131	152	137	1009	485	48,1	524
Engineering Drawing	1	3	13	18	1	14	18	5	73	35	47,9	38
Physics IA	6	4	18	26	7	10	7	36	114	54	47,4	60
Mathematics	9	5	16	31	2	10	19	40	132	61	46,2	71
Computer Science	2	2	3	3	0	2	7	5	24	10	41,7	14
Botany	4	10	100	261	78	118	241	110	922	375	40,7	547
Zoology	13	16	91	243	67	67	221	197	915	363	39,7	552
Physiology IA	0	0	4	3	3	0	5	3	18	7	38,9	11

APPENDIX 8

FIRST-YEAR DEGREE RESULTS ACCORDING TO FACULTIES AT THE UNIVERSITY OF DURBAN-WESTVILLE : 1971 - 1976

FACULTY	GROUP	S Y M B O L S										TOTAL							
		A		B		C		D		E <sup>+</sup>		E		≤ F		XDP		No.	%
		75-100%		70-74%		60-69%		50-59%		45-49%		40-44%		< 40%					
		No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%		
Arts	Total	42	1,1	60	1,6	542	14,8	1563	42,7	374	10,2	330	9	440	12	310	8,5	3661	100
	Male	14	0,8	26	1,4	227	12,4	721	39,5	206	11,3	173	9,5	262	14,4	195	10,7	1824	100
	Female	28	1,5	34	1,9	315	17,1	842	45,8	168	9,1	157	8,5	178	9,7	115	6,3	1837	100
Commerce	Total	57	1,4	76	1,8	543	13,2	1702	41,3	300	7,3	287	7	771	18,7	386	9,3	4122	100
	Male	55	1,5	70	2	494	13,8	1486	41,5	262	7,3	242	6,8	638	17,8	339	9,4	3586	100
	Female	2	0,4	6	1,1	49	9,1	216	40,3	38	7,1	45	8,4	133	24,8	47	8,8	536	100
Education	Total	4	0,4	6	0,6	112	11	494	48,7	83	8,2	102	10,1	140	13,8	73	7,2	1014	100
	Male	4	0,7	4	0,7	61	11,4	254	47,4	43	8	54	10,1	80	14,9	36	6,7	536	100
	Female	0	0	2	0,4	51	10,7	240	50,2	40	8,4	48	10	60	12,6	37	7,7	478	100
Law	Total	3	0,4	6	0,8	71	9,8	288	39,7	50	6,9	59	8,1	129	17,8	119	16,4	725	100
	Male	2	0,3	5	0,8	57	9,6	223	37,4	45	7,6	46	7,7	115	19,3	103	17,3	596	100
	Female	1	0,8	1	0,8	14	10,9	65	50,4	5	3,9	13	10,1	14	10,9	16	12,4	129	100
Science	Total	122	3,2	128	3,4	551	14,6	1235	32,6	280	7,4	377	10	605	16	488	12,9	3786	100
	Male	115	3,9	116	3,9	465	15,6	951	32	219	7,4	288	9,7	453	15	365	12,3	2972	100
	Female	7	0,9	12	1,5	86	10,6	284	34,9	61	7,5	89	10,9	152	18,7	123	15,1	814	100
Total	Total	228	1,7	276	2,1	1819	13,7	5282	39,7	1087	8,2	1155	8,7	2085	15,7	1373	10,3	13305	100
	Male	190	2,0	221	2,3	1304	13,7	3635	38,2	775	8,1	803	8,4	1548	16,3	1035	10,9	9511	100
	Female	38	1,0	55	1,4	515	13,6	1647	43,4	312	8,2	352	9,3	537	14,2	338	8,9	3794	100

APPENDIX 9

XDP's (REFUSAL OF DULY PERFORMED CERTIFICATES) PER SUBJECT PER FACULTY :  
1971 - 1976

FACULTY	SUBJECTS	STUDENT TOTAL	NO. OF XDP's	% XDP's
Arts	Special Afrikaans	1	0	0
	Biblical Studies	13	0	0
	Classical Hebrew, Special/Ancient Greek	21	0	0
	Gujerati	1	0	0
	Hindi, Tamil, Telegu	32	0	0
	Islamic Studies	25	0	0
	Library Science	5	0	0
	Logopaedics	9	0	0
	Missiology and Elenitics	10	0	0
	Speech Science	7	0	0
	Political Science	114	1	0,9
	Psychology	387	9	2,3
	Physical Education	74	2	2,7
	Anthropology	60	2	3,3
	Oriental Studies	116	4	3,4
	Special English	57	2	3,5
	Criminology	165	6	3,6
	Social Work	101	4	4
	Practical English	1022	43	4,2
	Painting and Composition	48	2	4,2
	English	709	32	4,5
	Science of Religion	21	1	4,8
	Design	51	3	5,9
	History	286	19	6,6
	Speech and Drama, Communication	98	7	7,1
	Philosophy	149	11	7,4
	Sociology	214	16	7,5
	Art	63	5	7,9
	General Church History	11	1	9,1
	Practical Theology & Systematic Theology	11	1	9,1
	Appreciation and Introduction to Art	32	3	9,4
	Arabic, Urdu, Urdu Special	31	3	9,7
	Afrikaans - Neederlanus	57	6	10,5
Latin	96	11	11,5	
Special French	14	2	14,3	
Indoogy ana Sanskrit	7	1	14,3	
Practical Afrikaans	455	73	16,0	
History of Art	10	2	20,0	
Anatomy	16	4	25,0	
Special Latin	240	97	40,4	
Commerce	Industrial Psychology	32	0	0
	Economics	1002	21	2,1
	Public Administration	74	2	2,7



## APPENDIX 9 (CONTINUED)

FACULTY	SUBJECTS	STUDENT TOTAL	NO. OF XDP's	% XDP's
	Accounting	1022	59	5,8
	Business Economics	870	57	6,6
	Mathematical Statistics	10	1	10,0
	Statistics	620	154	24,8
Education (Degree)	Cloth & Interior Design	5	0	0
	Home Management	5	0	0
	Education	302	6	2
	Biology	25	9	36,0
	Afrikaans Elementer	56	6	10,7
	Physical Science	15	2	13,3
Education (Diploma)	Accounting	83	0	0
	Afrikaans	336	0	0
	Art	55	0	0
	Business Economics	55	0	0
	Cloth Needle and Interior Design	19	0	0
	Commercial Mathematics	16	0	0
	Education	343	0	0
	Food, Nutrition and Home Management	21	0	0
	English	340	0	0
	Economics	12	0	0
	History	106	0	0
	Speech and Drama	41	0	0
	Physical Science	51	1	2
	Geography	91	2	2,2
	Physical Education	259	8	3,1
	Biology	50	2	4
	Mathematics	72	3	4,2
	Music	42	3	7,1
	Home Economics	5	1	20
	Latin	5	1	20
Law	Administration of Estates and Interpretation of Statutes	2	0	0
	Private Law	440	62	14,1
	Constitutional Law/Commercial Law	10	2	20
	Law of Public Administration	14	3	21,4
Science	Applied Mathematics	48	3	6,3
	Engineering Drawing	73	5	6,8
	Statics, Dynamics and Mechanics	77	9	11,7

APPENDIX 9 (CONTINUED)

FACULTY	SUBJECTS	STUDENT TOTAL	NO. OF XDP's	% XDP's
	Botany	922	110	11,9
	Physics IB	964	129	13,4
	Chemistry	1009	137	13,6
	Physics IA	18	3	16,7
	Engineering Mathematics	89	15	16,9
	Computer Science	24	5	20,8
	Zoology	915	197	21,5
	Technical Drawing	4	1	25
	Mathematics	132	40	30,3
	Physiology IA	114	36	31,6

APPENDIX 10

## FIRST-YEAR PASS GROUP AND FAIL GROUP ACCORDING TO PROVINCE

PROVINCE	Degree/ Diploma	PASS GROUP			FAIL GROUP		
		Total	Male	Female	Total	Male	Female
NATAL	Degree	1187	814	373	1498	1051	447
	Diploma	275	151	124	243	125	118
	Total	1462	965	497	1741	1176	565
TRANSVAAL	Degree	309	263	46	290	231	59
	Diploma	4	2	2	8	5	3
	Total	313	265	48	298	236	62
CAPE PROVINCE	Degree	81	61	20	103	79	24
	Diploma	5	4	1	5	3	2
	Total	86	65	21	108	82	26
PRIVATE/ CORRESPOND.	Degree	19	14	5	25	20	5
OUTSIDE REPUBLIC	Degree	5	5	0	11	10	1
NOT INDICATED	Degree	4	1	3	24	15	9
	Diploma	15	10	5	9	8	1
	Total	19	11	8	33	23	10



APPENDIX 11A

COMMUTER DISTANCE AND FIRST-YEAR PASS GROUP : 1971 - 1976

DEGREE/ DIPLOMA	DISTANCE IN KM	TOTAL	FULL- TIME		PART- TIME			TOTAL MALE	TOTAL FEMALE	
			MALE	FEMALE	MALE	FEMALE				
Degree	0	486	486	354	132	-	-	-	354	132
	1-10	682	639	440	199	43	30	13	470	212
	11-20	110	101	79	22	9	7	2	86	24
	21-35	275	248	183	65	27	24	3	207	68
	35 <sup>+</sup>	34	24	20	4	10	8	2	28	6
	NI	8	7	5	2	1	1	0	6	2
Diploma	0	42	42	26	16	-	-	-	26	16
	1-10	118	118	65	53	-	-	-	65	53
	11-20	51	51	22	29	-	-	-	22	29
	21-35	82	82	48	34	-	-	-	48	34
	35 <sup>+</sup>	4	4	3	1	-	-	-	3	1
	NI	2	2	2	-	-	-	-	2	0
Total	0	528	528	380	148	-	-	-	380	148
	1-10	800	757	505	252	43	30	13	535	265
	11-20	161	152	101	51	9	7	2	108	53
	21-35	357	330	231	99	27	24	3	255	102
	35 <sup>+</sup>	38	28	23	5	10	8	2	31	7
	NI	10	9	7	2	1	1	0	8	2

APPENDIX 11 B

COMMUTER DISTANCE AND FIRST-YEAR FAIL GROUP : 1971 - 1976

DEGREE/ DIPLOMA	GROUP	TOTAL	FULL- TIME	MALE	FEMALE	PART- TIME	MALE	FEMALE	TOTAL MALE	TOTAL FEMALE
Degree	0	463	463	331	132	0	0	0	331	132
	1-10	847	742	511	231	105	81	24	592	255
	11-20	174	160	115	45	14	12	2	127	47
	21-35	396	331	253	78	65	56	9	309	87
	35 <sup>+</sup>	59	42	29	13	17	12	5	41	18
	Not Indicated	12	4	3	1	8	7	1	10	2
Diploma	0	22	22	9	13	-	-	-	9	13
	1-10	112	112	52	60	-	-	-	52	60
	11-20	38	38	26	12	-	-	-	26	12
	21-35	84	84	46	38	-	-	-	46	38
	35 <sup>+</sup>	7	7	5	2	-	-	-	5	2
	Not Indicated	2	2	2	-	-	-	-	2	0
Total	0	485	485	340	145	0	0	0	340	145
	1-10	959	854	563	291	105	81	24	644	315
	11-20	212	198	141	57	14	12	2	153	59
	21-35	480	415	299	116	65	56	9	355	125
	35 <sup>+</sup>	66	49	34	15	17	12	5	46	20
	Not Indicated	14	6	5	1	8	7	1	12	2

APPENDIX 12 A

HOME LANGUAGE AND FIRST-YEAR PASS GROUP : 1971 - 1976

SUBJECT	DEGREE/ DIPLOMA	TOTAL	FULL - TIME	MALE	FEMALE	PART - TIME	MALE	FEMALE	TOTAL MALE	TOTAL FEMALE
Not Indicated	Degree	78	73	58	15	5	4	1	62	16
	Diploma	34	34	20	14	0	0	0	20	14
	Total	112	107	78	29	5	4	1	82	30
English	Degree	768	726	508	218	42	34	8	542	226
	Diploma	148	148	78	70	0	0	0	78	70
	Total	916	874	586	288	42	34	8	620	296
Tamil	Degree	109	98	69	29	11	10	1	79	30
	Diploma	36	36	22	14	0	0	0	22	14
	Total	145	134	91	43	11	10	1	101	44
Hindi	Degree	137	119	92	27	18	13	5	105	32
	Diploma	40	40	27	13	0	0	0	27	13
	Total	177	159	119	40	18	13	5	132	45
Gujerati	Degree	338	332	234	98	6	3	3	237	101
	Diploma	20	20	7	13	0	0	0	7	13
	Total	358	352	241	111	6	3	3	244	114
Urdu	Degree	50	45	30	15	5	4	1	34	16
	Diploma	6	6	3	3	0	0	0	3	3
	Total	56	51	33	18	5	4	1	37	19
Telegu	Degree	26	25	18	7	1	1	0	19	7
	Diploma	9	9	6	3	0	0	0	6	3
	Total	35	34	24	10	1	1	0	25	10
Memon	Degree	49	48	34	14	1	1	0	35	14
	Diploma	4	4	3	1	0	0	0	3	1
	Total	53	52	37	15	1	1	0	38	15
Afrikaans	Degree	9	9	8	1	0	0	0	8	1
	Diploma	0	0	0	0	0	0	0	0	0
	Total	9	9	8	1	0	0	0	8	1
English & Afrikaans	Degree	41	40	38	2	1	0	1	38	3
	Diploma	2	2	0	2	0	0	0	0	2
	Total	43	42	38	4	1	0	1	38	5



APPENDIX 12 B

HOME LANGUAGE AND FIRST-YEAR FAIL GROUP : 1971 - 1976

SUBJECT	DEGREE/ DIPLOMA	TOTAL	FULL - TIME	MALE	FEMALE	PART - TIME	MALE	FEMALE	TOTAL MALE	TOTAL FEMALE
Not Indicated	Degree	108	97	74	23	11	11	0	85	23
	Diploma	26	26	13	13	0	0	0	13	13
	Total	134	123	87	36	11	11	0	98	36
English	Degree	1027	920	646	274	107	87	20	733	294
	Diploma	145	145	75	70	0	0	0	75	70
	Total	1172	1065	721	344	107	87	20	808	364
Tamil	Degree	161	128	84	44	33	28	5	112	49
	Diploma	27	27	11	16	0	0	0	11	16
	Total	188	155	95	60	33	28	5	123	65
Hindi	Degree	160	130	94	36	30	22	8	116	44
	Diploma	38	38	23	15	0	0	0	23	15
	Total	198	168	117	51	30	22	8	139	59
Gujerati	Degree	263	253	184	69	10	9	1	193	70
	Diploma	15	15	9	6	0	0	0	9	6
	Total	278	268	193	75	10	9	1	202	76
Urdu	Degree	78	71	49	22	7	5	2	54	24
	Diploma	7	7	5	2	0	0	0	5	2
	Total	85	78	54	24	7	5	2	59	26
Telegu	Degree	62	52	36	16	10	6	4	42	20
	Diploma	5	5	3	2	0	0	0	3	2
	Total	67	57	39	18	10	6	4	45	22
Memon	Degree	43	42	32	10	1	0	1	32	11
	Diploma	0	0	0	0	0	0	-	0	0
	Total	43	42	32	10	1	0	1	32	11
Afrikaans	Degree	8	8	8	-	-	-	-	8	0
	Diploma	0	0	0	-	-	-	-	0	0
	Total	8	8	8	-	-	-	-	8	0
English & Afrikaans	Degree	41	41	32	9	-	-	-	32	9
	Diploma	2	2	1	1	-	-	-	1	1
	Total	43	43	33	10	-	-	-	33	10

## APPENDIX 13 A

AGE AND FIRST-YEAR PASS GROUP : 1971 - 1976

AGE GROUP	DEGREE/ DIPLOMA	TOTAL	FULL- TIME	MALE		FEMALE		PART- TIME	MALE		FEMALE		TOTAL MALE	TOTAL FEMALE
				MALE	FEMALE	MALE	FEMALE		MALE	FEMALE				
≤ 17	Degree	134	134	80	54	-	-	-	80	54	-	-	80	54
	Diploma	8	8	1	7	-	-	-	1	7	-	-	1	7
	Total	142	142	81	61	-	-	-	81	61	-	-	81	61
18	Degree	590	588	407	181	2	2	0	409	181	2	0	409	181
	Diploma	86	86	44	42	0	0	0	44	42	0	0	44	42
	Total	676	674	451	223	2	2	0	453	223	2	0	453	223
19	Degree	423	422	296	126	1	1	0	297	126	1	0	297	126
	Diploma	87	87	42	45	0	0	0	42	45	0	0	42	45
	Total	510	509	338	171	1	1	0	339	171	1	0	339	171
20	Degree	186	186	149	37	-	-	-	149	37	-	-	149	37
	Diploma	71	71	45	26	-	-	-	45	26	-	-	45	26
	Total	257	257	194	63	-	-	-	194	63	-	-	194	63
21	Degree	84	82	71	11	2	2	0	73	11	2	0	73	11
	Diploma	29	29	21	8	0	0	0	21	8	0	0	21	8
	Total	113	111	92	19	2	2	0	94	19	2	0	94	19
22-25	Degree	124	88	74	14	36	29	7	103	21	36	7	103	21
	Diploma	12	12	7	5	0	0	0	7	5	0	0	7	5
	Total	136	100	81	19	36	29	7	110	26	36	7	110	26
26-30	Degree	35	9	8	1	26	19	7	27	8	26	7	27	8
	Diploma	0	0	0	0	0	0	0	0	0	0	0	0	0
	Total	35	9	8	1	26	19	7	27	8	26	7	27	8
31 <sup>+</sup>	Degree	29	6	4	2	23	17	6	21	8	23	6	21	8
	Diploma	6	6	6	0	0	0	0	6	0	0	0	6	0
	Total	35	12	10	2	23	17	6	27	8	23	6	27	8

APPENDIX 13 B

AGE AND FIRST-YEAR FAIL GROUP : 1971 - 1976

AGE GROUP	DEGREE/ DIPLOMA	TOTAL	FULL- TIME	MALE	FEMALE	PART- TIME	MALE	FEMALE	TOTAL MALE	TOTAL FEMALE
≤ 17	Degree	171	168	108	60	3	3	0	111	60
	Diploma	10	10	3	7	0	0	0	3	7
	Total	181	178	111	67	3	3	0	114	67
18	Degree	614	612	401	211	2	2	0	403	211
	Diploma	81	81	40	41	0	0	0	40	41
	Total	695	693	441	252	2	2	0	443	252
19	Degree	478	478	339	139	-	-	-	339	139
	Diploma	80	80	44	36	-	-	-	44	36
	Total	558	558	383	175	-	-	-	383	175
20	Degree	244	240	187	53	4	4	0	191	53
	Diploma	53	53	27	26	0	0	0	27	26
	Total	297	293	214	79	4	4	0	218	79
21	Degree	112	111	88	23	1	1	0	89	23
	Diploma	20	20	12	8	0	0	0	12	8
	Total	132	131	100	31	1	1	0	101	31
22-25	Degree	185	110	95	15	75	54	21	149	36
	Diploma	17	17	10	7	0	0	0	10	7
	Total	202	127	105	22	75	54	21	159	43
26-30	Degree	77	16	14	2	61	48	13	62	15
	Diploma	0	0	0	0	0	0	0	0	0
	Total	77	16	14	2	61	48	13	62	15
31+	Degree	70	7	7	0	63	56	7	63	7
	Diploma	4	4	4	0	0	0	0	4	0
	Total	74	11	11	0	63	56	7	67	7



APPENDIX 14 A

MATRICULATION STATUS AND FIRST-YEAR PASS GROUP : 1971 - 1976

FACULTY	MATRICULATION STATUS	DEGREE					DIPLOMA			TOTAL				
		FULL - TIME	PART - TIME	TOTAL	MALE	FEMALE	TOTAL	MALE	FEMALE	FULL - TIME	PART - TIME	TOTAL	MALE	FEMALE
Arts	Not Indicated	6	1	7	5	2	7	6	1	13	1	14	11	3
	Full Matriculation Exemption	312	33	345	150	195	4	1	3	316	33	349	151	198
	Conditional or Mature Age Exemption	24	29	53	28	25	2	1	1	26	29	55	29	26
	Senior Certificate without Matriculation Exemption	2	1	3	1	2	3	4	4	10	1	11	5	6
Commerce	Not Indicated													
	Full Matriculation Exemption	542	7	549	481	68	1	1	0	543	7	550	482	68
	Conditional or Mature Age Exemption	62	19	81	74	7	1	1	0	63	19	82	75	7
	Senior Certificate without Matriculation Exemption						20	17	3	20	0	20	17	3
Education	Not Indicated													
	Full Matriculation Exemption	125	0	125	63	57	60	38	22	185	0	185	106	79
	Conditional or Mature Age Exemption						5	4	1	5	0	5	4	1
	Senior Certificate without Matriculation Exemption						188	89	99	188	0	188	89	99
Law	Not Indicated													
	Full Matriculation Exemption	64	0	64	48	16	-	-	-	64	0	64	48	16
	Conditional or Mature Age Exemption	3	0	3	3	0	-	-	-	3	0	3	3	0
	Senior Certificate without Matriculation Exemption													
Science	Not Indicated	2	0	2	2	0	-	-	-	2	0	2	2	0
	Full Matriculation Exemption	373	0	373	300	73	-	-	-	373	0	373	300	73
	Conditional or Mature Age Exemption	3	0	3	3	0	-	-	-	3	0	3	3	0
	Senior Certificate without Matriculation Exemption													
Total	Not Indicated	8	1	9	7	2	7	6	1	15	1	16	13	3
	Full Matriculation Exemption	1416	40	1456	1047	409	65	40	25	1481	40	1521	1087	434
	Conditional or Mature Age Exemption	92	48	140	108	32	8	6	2	100	48	148	114	34
	Senior Certificate without Matriculation Exemption	2	1	3	1	2	216	110	105	218	1	219	111	108
	TOTAL	1518	90	1608	1163	445	296	162	134	1814	90	1904	1325	579

## MATRICULATION STATUS AND FIRST-YEAR FAIL GROUP : 1971 - 1976

FACULTY	MATRICULATION STATUS	DEGREE					DIPLOMA			TOTAL				
		FULL-TIME	PART-TIME	TOTAL	MALE	FEMALE	TOTAL	MALE	FEMALE	FULL-TIME	PART-TIME	TOTAL	MALE	FEMALE
Arts	Not Indicated	52	29	81	59	22	18	10	8	70	29	99	69	30
	Full Matriculation Exemption	344	51	395	216	179	4	3	1	348	51	399	219	180
	Conditional or Mature Age Exemption	65	88	153	110	43	-	-	-	65	88	153	110	43
	Senior Certificate without Matriculation Exemption	10	5	15	10	5	38	10	28	48	5	53	20	33
Commerce	Not Indicated	44	9	53	43	10	20	17	3	64	9	73	60	13
	Full Matriculation Exemption	210	11	221	185	36	2	2	0	212	11	223	187	36
	Conditional or Mature Age Exemption	45	15	60	54	6	4	3	1	49	15	64	57	7
	Senior Certificate without Matriculation Exemption	1	1	2	2	0	15	11	4	16	1	17	13	4
Education	Not Indicated	10	0	10	7	3	21	13	8	31	0	31	20	11
	Full Matriculation Exemption	118	0	118	64	54	47	26	21	165	0	165	90	75
	Conditional or Mature Age Exemption	2	0	2	2	0	10	7	3	12	0	12	9	3
	Senior Certificate without Matriculation Exemption	1	0	1	0	1	85	37	48	86	0	86	37	49
Law	Not Indicated	6	0	6	5	1	-	-	-	6	0	6	5	1
	Full Matriculation Exemption	64	0	64	54	10	-	-	-	64	0	64	54	10
	Conditional or Mature Age Exemption	16	0	16	15	1	-	-	-	16	0	16	15	1
	Senior Certificate without Matriculation Exemption	-	-	-	-	-	-	-	-	-	-	-	-	-
Science	Not Indicated	70	0	70	54	16	-	-	-	70	0	70	54	16
	Full Matriculation Exemption	679	0	679	522	157	-	-	-	679	0	679	522	157
	Conditional or Mature Age Exemption	6	0	6	5	1	-	-	-	6	0	6	5	1
	Senior Certificate without Matriculation Exemption	-	-	-	-	-	-	-	-	-	-	-	-	-
Total	Not Indicated	182	38	220	168	52	59	40	19	241	38	279	208	71
	Full Matriculation Exemption	1415	62	1477	1041	436	53	31	22	1468	62	1530	1072	458
	Conditional or Mature Age Exemption	134	103	237	186	51	14	10	4	148	103	251	196	55
	Senior Certificate without Matriculation Exemption	12	6	18	12	6	138	58	80	150	6	156	70	86
	TOTAL	1743	209	1952	1407	545	264	139	125	2007	209	2216	1546	670

APPENDIX 15 A

MATRICULATION AGGREGATE AND FIRST-YEAR PASS GROUP : 1971 - 1976

AGGREGATE SYMBOL	DEGREE DIPLOMA	TOTAL	FULL-TIME	MALE	FEMALE	PART-TIME	MALE	FEMALE	TOTAL MALE	TOTAL FEMALE
Not Indicated	Degree	398	333	273	60	65	49	16	322	76
	Diploma	23	23	15	8	-	-	-	15	8
	Total	421	356	288	68	65	49	16	337	84
F	Degree	2	-	-	-	2	1	1	1	1
	Diploma	3	3	2	1	-	-	-	2	1
	Total	5	3	2	1	2	1	1	3	2
E	Degree	12	9	6	3	3	2	1	8	4
	Diploma	169	169	85	84	-	-	-	85	84
	Total	181	178	91	87	3	2	1	93	88
E <sup>+</sup>	Degree	414	401	269	132	13	13	0	282	132
	Diploma	71	71	41	30	-	-	-	41	30
	Total	485	472	310	162	13	13	0	323	162
D	Degree	639	633	439	194	6	4	2	443	196
	Diploma	33	33	23	10	-	-	-	23	10
	Total	672	666	462	204	6	4	2	466	206
C	Degree	135	134	97	37	1	1	-	98	37
	Diploma	-	-	-	-	-	-	-	-	-
	Total	135	134	97	37	1	1	-	98	37
B	Degree	4	4	4	-	-	-	-	4	0
	Diploma	-	-	-	-	-	-	-	-	-
	Total	4	4	4	-	-	-	-	4	0
A	Degree	1	1	1	-	-	-	-	1	0
	Diploma	-	-	-	-	-	-	-	-	-
	Total	1	1	1	-	-	-	-	1	0



APPENDIX 15 B

MATRICULATION AGGREGATE AND FIRST-YEAR FAIL GROUP : 1971 - 1976

AGGREGATE SYMBOL	DEGREE DIPLOMA	TOTAL	FULL-TIME	MALE	FEMALE	PART-TIME	MALE	FEMALE	TOTAL MALE	TOTAL FEMALE
Not Indicated	Degree	703	537	416	121	166	129	37	545	158
	Diploma	69	69	46	23	-	-	-	46	23
	Total	772	606	462	144	166	129	37	591	181
F	Degree	2	2	1	1	-	-	-	1	1
	Diploma	23	23	10	13	-	-	-	10	13
	Total	25	25	11	14	-	-	-	11	14
E	Degree	12	9	6	3	3	2	1	8	4
	Diploma	94	94	38	56	0	0	0	38	56
	Total	106	103	44	59	3	2	1	46	60
E <sup>+</sup>	Degree	570	541	350	191	29	26	3	376	194
	Diploma	54	54	30	24	-	-	-	30	24
	Total	624	595	380	215	29	26	3	406	218
D	Degree	599	590	424	166	9	9	0	433	166
	Diploma	25	25	16	9	-	-	-	16	9
	Total	624	615	440	175	9	9	0	449	175
C	Degree	63	61	40	21	2	2	0	42	21
	Diploma	-	-	-	-	-	-	-	-	-
	Total	63	61	40	21	2	2	0	42	21
B	Degree	2	2	2	-	-	-	-	2	0
	Diploma	-	-	-	-	-	-	-	-	-
	Total	2	2	2	-	-	-	-	2	0
A	Degree	-	-	-	-	-	-	-	-	-
	Diploma	-	-	-	-	-	-	-	-	-
	Total	-	-	-	-	-	-	-	-	-

## APPENDIX 16

MATRICULATION SYMBOLS OF SUBJECTS TAKEN BY PASS GROUP AND FAIL GROUP  
ACCORDING TO DEGREE OR DIPLOMA : 1971-1976

SUBJECT	DEGREE DIPLOMA	GROUP	MATRIC SYMBOLS					
			A	B	C	D	E	F
English	Degree	Pass	2	5	84	398	579	1
		Fail	2	11	72	392	640	1
	Diploma	Pass	0	0	8	70	179	4
		Fail	0	0	2	41	121	7
Maths	Degree	Pass	35	74	207	312	283	62
		Fail	32	50	180	316	348	43
	Diploma	Pass	0	0	10	39	82	38
		Fail	0	2	7	21	38	26
Physical Science	Degree	Pass	10	25	102	151	100	10
		Fail	2	7	80	154	153	13
	Diploma	Pass	0	1	0	7	18	9
		Fail	0	0	3	6	11	7
Biology	Degree	Pass		13	120	316	303	29
		Fail	1	3	75	282	391	33
	Diploma	Pass		0	2	29	109	53
		Fail	0	1	4	19	59	24
Afrikaans	Degree	Pass	1	5	38	185	492	52
		Fail	1	8	39	153	508	91
	Diploma	Pass	0	0	0	24	95	46
		Fail	0	0	0	15	62	45
History	Degree	Pass	18	49	124	132	81	4
		Fail	16	35	129	164	141	7
	Diploma	Pass	0	5	21	39	39	10
		Fail	0	2	16	18	26	6

APPENDIX 16 (CONTINUED)

MATRICULATION SYMBOLS OF SUBJECTS TAKEN BY PASS GROUP AND FAIL GROUP  
 ACCORDING TO DEGREE OR DIPLOMA : 1971-1976

SUBJECT	DEGREE DIPLOMA	GROUP	MATRIC SYMBOLS					
			A	B	C	D	E	F
Geography	Degree	Pass	3	26	91	229	306	71
		Fail	1	8	51	214	332	101
	Diploma	Pass	2	6	11	43	88	40
		Fail	0	1	2	16	51	22
Accounting	Degree	Pass	34	82	187	159	52	4
		Fail	17	48	112	162	160	13
	Diploma	Pass	0	2	23	44	35	7
		Fail	0	5	9	27	18	3



## MATRICULATION SYMBOLS OF SUBJECTS TAKEN BY PASS GROUP AND FAIL GROUP ACCORDING TO FACULTY : 1971 - 1976

SUBJECT	FACULTY	GROUP	SYMBOLS					
			A	B	C	D	E	F
English	Arts	Pass	2	4	34	117	98	1
		Fail	1	6	37	113	165	3
	Commerce	Pass			7	97	267	3
		Fail		1	2	49	135	3
	Education	Pass			16	108	215	1
		Fail			4	82	149	2
	Law	Pass			5	25	24	
		Fail			1	18	33	
	Science	Pass		1	30	121	154	
		Fail		4	32	171	279	
Mathematics	Arts	Pass	3	3	22	60	101	26
		Fail	3	5	16	74	107	32
	Commerce	Pass	4	19	60	134	108	17
		Fail	3	6	27	43	67	3
	Education	Pass	1	4	14	64	107	47
		Fail	2	6	22	38	73	31
	Law	Pass			6	13	17	8
		Fail			1	0	16	
	Science	Pass	27	48	115	80	32	2
		Fail	24	35	121	172	123	3
Afrikaans	Arts	Pass	1	1	11	48	93	6
		Fail		1	12	39	118	35
	Commerce	Pass		2	5	40	176	35
		Fail			3	15	86	34
	Education	Pass			3	44	141	43
		Fail			6	39	99	36
	Law	Pass			4	14	26	2
		Fail				5	32	9
	Science	Pass		2	15	63	151	12
		Fail	1	7	18	70	235	22
History	Arts	Pass	7	16	55	51	24	2
		Fail	7	11	47	62	51	3
	Commerce	Pass	3	4	16	24	27	1
		Fail	1	4	9	20	20	1
	Education	Pass	2	10	35	51	40	10
		Fail	2	4	33	34	30	5
	Law	Pass			4	5	12	13
		Fail		3	3	8	5	
	Science	Pass	6	20	34	33	16	1
		Fail	6	15	53	58	61	4

SUBJECT	FACULTY	GROUP	SYMBOLS					
			A	B	C	D	E	F
Physical Science	Arts	Pass		1	8	19	22	6
		Fail			7	21	40	4
	Commerce	Pass		2	11	50	47	1
		Fail			9	16	25	3
	Education	Pass		1	5	18	21	8
		Fail			5	17	20	7
	Law	Pass		1	1	4	10	3
Fail				1	3	2		
Science	Pass	10	21	77	67	18	1	
	Fail	2	7	61	103	77	6	
Biology	Arts	Pass		3	24	70	86	12
		Fail		1	20	79	134	14
	Commerce	Pass			21	98	129	15
		Fail		1	4	35	76	10
	Education	Pass		1	12	69	139	50
		Fail	1	1	11	45	92	21
	Law	Pass		1		12	18	3
Fail				3	10	23	2	
Science	Pass	8	65	96	40	2		
	Fail	1	41	132	125	10		
Geography	Arts	Pass	1	9	25	60	80	16
		Fail		1	22	73	110	17
	Commerce	Pass	1	4	23	80	124	42
		Fail		1	3	27	48	25
	Education	Pass		7	19	69	120	45
		Fail		2	7	36	73	26
	Law	Pass			3	6	14	5
Fail				1	11	13	4	
Science	Pass	3	12	32	57	56	3	
	Fail		5	21	83	139	51	
History	Arts	Pass	5	3	14	25	13	3
		Fail	1	6	18	42	27	4
	Commerce	Pass	14	46	91	77	24	1
		Fail	1	12	33	26	19	1
	Education	Pass	3	13	38	48	35	1
		Fail	1	5	13	32	22	3
	Law	Pass			11	8	6	
Fail			1	4	8	8	2	
Science	Pass	12	22	56	45	9		
	Fail	13	30	53	81	42	6	

APPENDIX 18

NUMBER OF YEARS TAKEN BY GRADUATES OF 1971 - 1976 FIRST YEAR INTAKES TO PASS FIRST YEAR

FACULTY	NUMBER OF YEARS TAKEN TO PASS FIRST YEAR	DEGREE					DIPLOMA			TOTAL				
		TOTAL	FULL-TIME	PART-TIME	MALE	FEMALE	TOTAL	MALE	FEMALE	TOTAL	FULL-TIME	PART-TIME	MALE	FEMALE
Arts	1 Year	283	245	38	122	161	12	8	4	295	257	38	130	165
	2 Years	159	138	21	76	83	4	2	2	163	142	21	78	85
	3 Years	21	17	4	19	2	0	0	0	21	17	4	19	2
	4 Years	1	1	-	-	1	-	-	-	1	1	0	0	1
	TOTAL	464	401	63	217	247	16	10	6	480	417	63	227	253
Commerce	1 Year	303	300	3	267	36	3	3	0	306	303	3	270	36
	2 Years	28	28	0	25	3	2	1	1	30	30	0	26	4
	3 Years	4	4	0	4	-	-	-	-	4	4	0	4	0
	4 Years	-	-	-	-	-	-	-	-	-	-	-	-	-
	TOTAL	335	332	3	296	39	5	4	1	340	337	3	300	40
Education	1 Year	92	92	0	45	47	223	115	108	315	315	-	160	155
	2 Years	22	22	0	6	16	52	24	28	74	74	-	30	44
	3 Years	1	1	0	1	0	6	1	5	7	7	0	2	5
	4 Years	-	-	-	-	-	2	2	0	2	2	0	2	0
	TOTAL	115	115	0	52	63	283	142	141	398	398	0	194	204
Law	1 Year	13	13	0	9	4	-	-	-	13	13	0	9	4
	2 Years	5	5	0	5	0	-	-	-	5	5	0	5	0
	3 Years	-	-	-	-	-	-	-	-	-	-	-	-	-
	4 Years	1	1	0	1	0	-	-	-	1	1	0	1	0
	TOTAL	19	19	0	15	4	-	-	-	19	19	0	15	4
Science	1 Year	158	158	0	120	38	-	-	-	158	158	0	120	38
	2 Years	132	132	0	92	40	-	-	-	132	132	0	92	40
	3 Years	6	6	0	3	3	-	-	-	6	6	0	3	3
	4 Years	-	-	-	-	-	-	-	-	-	-	-	-	-
	TOTAL	296	296	0	215	81	-	-	-	296	296	0	215	81
Total	1 Year	849	808	41	563	286	238	126	112	1087	1046	41	689	398
	2 Years	346	325	21	204	142	58	27	31	404	383	21	231	173
	3 Years	32	28	4	27	5	7	2	5	39	35	4	29	10
	4 Years	2	2	0	1	1	1	1	0	3	3	0	2	1
	TOTAL	1229	1163	66	795	434	304	156	148	1533	1467	66	951	582

APPENDIX 19

NUMBER OF YEARS TAKEN BY DEGREE STUDENTS FROM 1971 - 1976 FIRST YEAR INTAKES TO COMPLETE MAJORS

DEGREE	GROUP	NUMBER OF STUDENTS PASSING MAJORS IN						TOTAL
		3 Years	4 Years	5 Years	6 Years	7 Years	8 Years	
3-Year Degree	Total	486	327	158	17	4	1	993
	Male	367	206	123	15	2	1	714
	Female	119	121	35	2	2	0	279
4-Year Degree	Total	72	153	84	10	3	1	323
	Male	37	51	30	6	2	0	126
	Female	35	102	54	4	1	1	197
5-Year Degree	Total	-	-	-	2	1	-	3
	Male	-	-	-	2	1	-	3
	Female	-	-	-	0	0	-	0
6-Year Degree	Total	-	-	1	-	4	-	5
	Male	-	-	1	-	4	-	5
	Female	-	-	0	-	0	-	0



## APPENDIX 20

## NUMBER OF YEARS BY 1971 - 1976 FIRST-YEAR STUDENTS TO GRADUATE

DEGREE/ DIPLOMA	SEX	NUMBER OF STUDENTS GRADUATING IN						TOTAL
		Minimum Time	Minimum +1 Year	Minimum +2 Years	Minimum +3 Years	Minimum +4 Years	Minimum +5+ Years	
2-Year Diploma	Total	3	4	1	-	-	1	9
	Male	3	4	1	-	-	1	9
	Female	0	0	0	-	-	0	0
3-Year Diploma	Total	151	97	37	5	4	1	295
	Male	78	43	20	4	2	0	147
	Female	73	54	17	1	2	1	148
3-Year Degree	Total	285	362	204	49	26	19	945
	Male	207	240	162	41	21	13	684
	Female	78	122	42	8	5	6	261
4-Year Degree	Total	139	99	27	8	3	-	276
	Male	47	39	12	5	0	-	103
	Female	92	60	15	3	3	-	173
5-Year Degree	Total	1	-	2	-	-	-	3
	Male	1	-	2	-	-	-	3
	Female	0	-	0	-	-	-	0
6-Year Degree	Total	1	4	-	-	-	-	5
	Male	1	4	-	-	-	-	5
	Female	0	0	-	-	-	-	0
Total Diploma	Total	154	101	38	5	4	2	304
	Male	81	47	21	4	2	1	156
	Female	73	54	17	1	2	1	148
Total Degree	Total	426	465	233	57	29	19	1229
	Male	256	283	176	46	21	13	795
	Female	170	182	57	11	8	6	434
Total Degree & Diploma	Total	580	566	271	62	33	21	1533
	Male	337	330	197	50	23	14	951
	Female	243	236	74	12	10	7	582

## APPENDIX 21

NUMBER OF YEARS TAKEN BY FIRST-YEAR STUDENTS OF 1971-1976 TO GRADUATE :  
DEGREE, DIPLOMA, TOTAL

DEGREE/ DIPLOMA	FACULTY	TOTAL	NUMBER OF STUDENTS GRADUATING IN				MALE	FEMALE	FULL- TIME	PART- TIME
			Minimum Time	Minimum +1 Year	Minimum +2 Years	Minimum +2 <sup>+</sup> Years				
Degree	Arts	464	175	174	82	33	217	247	401	63
	Commerce	335	96	125	77	37	296	39	332	3
	Education	115	64	37	9	5	52	63	115	0
	Law	19	8	7	3	1	15	4	19	0
	Science	296	83	122	62	29	215	81	296	0
	TOTAL	1229	426	465	233	105	795	434	1163	66
Diploma	Arts	16	9	6	1	0	10	6	16	0
	Commerce	5	1	3	1	0	4	1	5	0
	Education	283	144	92	36	11	142	141	283	0
	TOTAL	304	154	101	38	11	156	148	304	0
Total	Arts	480	184	180	83	33	227	253	417	63
	Commerce	340	97	128	78	37	300	40	337	3
	Education	398	208	129	45	16	194	204	398	0
	Law	19	8	7	3	1	15	4	19	0
	Science	296	83	122	62	29	215	81	296	0
	TOTAL	1533	580	566	271	116	951	582	1467	66

APPENDIX 22

DISTRIBUTION OF DROP-OUTS FROM EACH INTAKE OF FIRST-YEAR STUDENTS : 1971 - 1976

YEAR	SEX	ARTS			COMMERCE			EDUCATION			LAW	SCIENCE	Total Degree	Total Diploma	Total Degree & Diploma
		Degree	Diploma	Total	Degree	Diploma	Total	Degree	Diploma	Total	Degree	Degree			
1971	Male	58	2	60	41	-	41	8	5	13	2	47	156	7	163
	Female	27	0	27	7	-	7	5	6	11	1	10	50	6	56
	Total	85	2	87	48	-	48	13	11	24	3	57	206	13	219
1972	Male	54	1	55	74	-	74	10	7	17	5	103	246	8	254
	Female	38	1	39	7	-	7	5	10	15	0	20	70	11	81
	Total	92	2	94	81	-	81	15	17	32	5	123	316	19	335
1973	Male	62	6	68	82	0	82	10	3	13	13	106	273	9	282
	Female	43	1	44	10	1	11	3	4	7	2	35	93	6	99
	Total	105	7	112	92	1	93	13	7	20	15	141	366	15	381
1974	Male	46	5	51	64	7	71	1	12	13	20	115	246	24	270
	Female	35	2	37	17	1	18	6	7	13	5	23	86	10	96
	Total	81	7	88	81	8	89	7	19	26	25	138	332	34	366
1975	Male	40	0	40	81	10	91	10	19	29	19	126	276	29	305
	Female	27	1	28	14	2	16	6	9	15	8	30	85	12	97
	Total	67	1	68	95	12	107	16	28	44	27	156	361	41	402
1976	Male	60	12	72	100	30	130	22	16	38	37	121	340	58	398
	Female	42	33	75	25	5	30	12	11	23	4	35	118	49	167
	Total	102	45	147	125	35	160	34	27	61	41	156	458	107	565
1971-1976	Male	320	26	346	442	47	489	61	62	123	96	618	1537	135	1672
	Female	212	38	250	80	9	89	37	47	84	20	153	502	94	596
	Total	532	64	596	522	56	578	98	109	207	116	771	2039	229	2268



APPENDIX 23 A

DROP-OUTS OF THE FACULTY OF ARTS ACCORDING TO YEAR AND SEMESTER : 1971-1976 FIRST-YEAR STUDENTS

DROP-OUT YEAR	DROP-OUT SEMESTER	DEGREE					DIPLOMA			TOTAL				
		Total	Male	Female	Full-Time	Part-Time	Total	Male	Female	Total	Male	Female	Full-Time	Part-Time
1	Semester One	69	49	20	46	23	9	3	6	78	52	26	55	23
	Semester Two before Xdps	55	41	14	45	10	9	6	3	64	47	17	54	10
	Semester Two after Xdps	171	108	63	108	63	26	11	15	197	119	78	134	63
2	Semester One	16	7	9	12	4	1	1	0	17	8	9	13	4
	Semester Two before Xdps	10	6	4	9	1	-	-	-	10	6	4	9	1
	Semester Two after Xdps	111	59	52	83	28	12	2	10	123	61	62	95	28
3	Semester One	7	4	3	4	3	1	0	1	8	4	4	5	3
	Semester Two before Xdps	4	2	2	4	0	1	1	0	5	3	2	5	0
	Semester Two after Xdps	48	26	22	44	4	4	1	3	52	27	25	48	4
4	Semester One	1	0	1	1	0	-	-	-	1	0	1	1	0
	Semester Two before Xdps	5	1	4	3	2	-	-	-	5	1	4	3	2
	Semester Two after Xdps	22	11	11	21	1	1	1	0	23	12	11	22	1
5	Semester One	4	0	4	4	0	-	-	-	4	0	4	4	0
	Semester Two before Xdps	1	1	0	1	0	-	-	-	1	1	0	1	0
	Semester Two after Xdps	5	3	2	4	1	-	-	-	5	3	2	4	1
6	Semester One	1	0	1	1	0	-	-	-	1	0	1	1	0
	Semester Two before Xdps	-	-	-	-	-	-	-	-	-	-	-	-	-
	Semester Two after Xdps	-	-	-	-	-	-	-	-	-	-	-	-	-
6 <sup>+</sup>		2	1	1	1	1	-	-	-	2	1	1	1	1
1	Total (First Year)	295	198	97	199	96	44	20	24	339	218	121	243	96
2	Total (Second Year)	137	72	65	104	33	13	3	10	150	75	75	117	33
3	Total (Third Year)	59	32	27	52	7	6	2	4	65	34	31	58	7
4	Total (Fourth Year)	28	12	16	25	3	1	1	0	29	13	16	26	3
5	Total (Fifth Year)	10	4	6	9	1	-	-	-	10	4	6	9	1
6	Total (Sixth Year)	1	0	1	1	0	-	-	-	1	0	1	1	0
6 <sup>+</sup>	Total (Sixth Plus)	2	1	1	1	1	-	-	-	2	1	1	1	1
1-6 <sup>+</sup>	GRAND TOTAL	532	319	213	391	141	64	26	38	596	345	251	455	141

APPENDIX 23 B

DROP-OUTS OF THE FACULTY OF COMMERCE ACCORDING TO YEAR AND SEMESTER : 1971 - 1976 FIRST-YEAR STUDENTS

DROP-OUT YEAR	DROP-OUT SEMESTER	DEGREE					DIPLOMA			TOTAL				
		Total	Male	Female	Full-Time	Part-Time	Total	Male	Female	Total	Male	Female	Full-Time	Part-Time
1	Semester One	37	32	5	31	6	8	7	1	45	39	6	39	6
	Semester Two before Xdps	53	43	10	43	10	13	11	2	66	54	12	56	10
	Semester Two after Xdps	147	123	24	125	22	16	13	3	163	136	27	141	22
2	Semester One	11	11	0	10	1	1	1	0	12	12	0	11	1
	Semester Two before Xdps	14	12	2	14	0	1	1	0	15	13	2	15	0
	Semester Two after Xdps	106	96	10	99	7	10	9	1	116	105	11	109	7
3	Semester One	8	7	1	7	1	1	1	0	9	8	1	8	1
	Semester Two before Xdps	6	4	2	5	1	6	4	2	6	4	2	5	1
	Semester Two after Xdps	86	67	19	84	2	5	3	2	91	70	21	89	2
4	Semester One	4	4	0	4	0	-	-	-	4	4	0	4	0
	Semester Two before Xdps	1	1	0	1	0	-	-	-	1	1	0	1	0
	Semester Two after Xdps	33	28	5	31	2	1	1	0	34	29	5	32	2
5	Semester One	3	3	0	3	0	-	-	-	3	3	0	3	0
	Semester Two before Xdps	3	3	0	3	0	-	-	-	3	3	0	3	0
	Semester Two after Xdps	4	4	0	4	0	-	-	-	4	4	0	4	0
6	Semester One	1	1	0	1	0	-	-	-	1	1	0	1	0
	Semester Two before Xdps	-	-	-	-	-	-	-	-	-	-	-	-	-
	Semester Two after Xdps	1	0	1	1	0	-	-	-	1	0	1	1	0
6 <sup>+</sup>		4	4	0	4	0	-	-	-	4	4	0	4	0
1	Total (First Year)	237	198	39	199	38	37	31	6	274	229	45	236	38
2	Total (Second Year)	131	119	12	123	8	12	11	1	143	130	13	135	8
3	Total (Third Year)	100	78	22	96	4	6	4	2	106	82	24	102	4
4	Total (Fourth Year)	38	33	5	36	2	1	1	0	39	34	5	37	2
5	Total (Fifth Year)	10	10	0	10	0	-	-	-	10	10	0	10	0
6	Total (Sixth Year)	2	1	1	2	0	-	-	-	2	1	1	2	0
6 <sup>+</sup>	Total (Sixth Plus)	4	4	0	4	0	-	-	-	4	4	0	4	0
1-6 <sup>+</sup>	GRAND TOTAL	522	443	79	470	52	56	47	9	578	490	88	526	52



APPENDIX 23 C

DROP-OUTS OF THE FACULTY OF EDUCATION ACCORDING TO YEAR AND SEMESTER : 1971 - 1976 FIRST-YEAR STUDENTS

DROP-OUT YEAR	DROP-OUT SEMESTER	DEGREE			DIPLOMA			TOTAL		
		Total	Male	Female	Total	Male	Female	Total	Male	Female
1	Semester One	16	12	4	26	15	11	42	27	15
	Semester Two before Xdps	13	4	9	16	9	7	29	13	16
	Semester Two after Xdps	26	16	10	29	14	15	55	30	25
2	Semester One	5	5	0	1	0	1	6	5	1
	Semester Two before Xdps	2	1	1	3	2	1	5	3	2
	Semester Two after Xdps	16	11	5	21	11	10	37	22	15
3	Semester One	2	1	1	2	2	0	4	3	1
	Semester Two before Xdps	-	-	-	1	0	1	1	0	1
	Semester Two after Xdps	8	6	2	5	5	0	13	11	2
4	Semester One	1	0	1	0	0	0	1	0	1
	Semester Two before Xdps	-	-	-	1	1	0	1	1	0
	Semester Two after Xdps	5	3	2	2	1	1	7	4	3
5	Semester One	-	-	-	-	-	-	-	-	-
	Semester Two before Xdps	-	-	-	1	1	0	1	1	0
	Semester Two after Xdps	2	1	1	1	1	0	3	2	1
6	Semester One	-	-	-	-	-	-	-	-	-
	Semester Two before Xdps	-	-	-	-	-	-	-	-	-
	Semester Two after Xdps	1	0	1	-	-	-	1	0	1
6 <sup>+</sup>		1	1	0	-	-	-	1	1	0
1	Total (First Year)	55	32	23	71	38	33	126	70	56
2	Total (Second Year)	23	17	6	25	13	12	48	30	18
3	Total (Third Year)	10	7	3	8	7	1	18	14	4
4	Total (Fourth Year)	6	3	3	3	2	1	9	5	4
5	Total (Fifth Year)	2	1	1	2	2	0	4	3	1
6	Total (Sixth Year)	1	0	1	-	-	-	1	0	1
6 <sup>+</sup>	Total (Sixth Plus)	1	1	0	-	-	-	1	1	0
1-6 <sup>+</sup>	GRAND TOTAL	98	61	37	109	62	47	207	123	84



APPENDIX 23 D

DROP-OUTS OF THE FACULTY OF LAW ACCORDING TO YEAR AND SEMESTER :  
1971 - 1976 FIRST-YEAR STUDENTS

DROP-OUT YEAR	DROP-OUT SEMESTER	DEGREE		
		Total	Male	Female
1	Semester One	6	6	0
	Semester Two before Xdps	3	1	2
	Semester Two after Xdps	24	21	3
2	Semester One	-	-	-
	Semester Two before Xdps	4	4	0
	Semester Two after Xdps	39	31	8
3	Semester One	-	-	-
	Semester Two before Xdps	2	2	0
	Semester Two after Xdps	26	20	6
4	Semester One	-	-	-
	Semester Two before Xdps	-	-	-
	Semester Two after Xdps	8	7	1
5	Semester One	-	-	-
	Semester Two before Xdps	-	-	-
	Semester Two after Xdps	3	3	0
6	Semester One	-	-	-
	Semester Two before Xdps	-	-	-
	Semester Two after Xdps	1	1	0
6 <sup>+</sup>		-	-	-
1	Total (First Year)	33	28	5
2	Total (Second Year)	43	35	8
3	Total (Third Year)	28	22	6
4	Total (Fourth Year)	8	7	1
5	Total (Fifth Year)	3	3	0
6	Total (Sixth Year)	1	1	0
6 <sup>+</sup>	Total (Sixth Plus)	-	-	-
1-6 <sup>+</sup>	GRAND TOTAL	116	96	20

## APPENDIX 23 E

DROP-OUTS OF THE FACULTY OF SCIENCE ACCORDING TO YEAR AND SEMESTER :  
1971 - 1976 FIRST-YEAR STUDENTS

DROP-OUT YEAR	DROP-OUT SEMESTER	DEGREE		
		Total	Male	Female
1	Semester One	83	73	10
	Semester Two before Xdps	94	69	25
	Semester Two after Xdps	282	223	59
2	Semester One	12	9	3
	Semester Two before Xdps	17	12	5
	Semester Two after Xdps	159	126	33
3	Semester One	5	3	2
	Semester Two before Xdps	6	6	0
	Semester Two after Xdps	62	54	8
4	Semester One	1	1	0
	Semester Two before Xdps	4	3	1
	Semester Two after Xdps	36	31	5
5	Semester One	2	2	0
	Semester Two before Xdps	-	-	-
	Semester Two after Xdps	4	4	0
6	Semester One	-	-	-
	Semester Two before Xdps	-	-	-
	Semester Two after Xdps	1	1	0
6 <sup>+</sup>		3	1	2
1	Total (First Year)	459	365	94
2	Total (Second Year)	188	147	41
3	Total (Third Year)	73	63	10
4	Total (Fourth Year)	41	35	6
5	Total (Fifth Year)	6	6	0
6	Total (Sixth Year)	1	1	0
6 <sup>+</sup>	Total (Sixth Plus)	3	1	2
1-6 <sup>+</sup>	GRAND TOTAL	771	618	153

APPENDIX 24

NUMBER OF COURSES PASSED BY DROP-OUTS OF 1971 - 1976 FIRST YEAR ADMISSIONS IN FIRST AND SUBSEQUENT YEARS

DROP-OUT GROUP	SEX	NUMBER OF STUDENTS PASSING								TOTAL
		0 Courses	1 Course	2 Courses	3 Courses	4 Courses	5 Courses	6 Courses	7+ Courses	
1st Year	Total	665	190	137	78	127	25	12	0	1234
	Male	485	141	99	57	101	15	10	0	908
	Female	180	49	38	21	26	10	2	0	326
2nd Year	Total	67	69	98	85	76	74	32	72	573
	Male	47	50	78	61	54	55	21	53	419
	Female	20	19	20	24	22	19	11	19	154
3rd Year	Total	14	17	13	34	44	49	35	83	289
	Male	10	12	9	29	37	37	23	56	213
	Female	4	5	4	5	7	12	12	27	76
4th Year	Total	6	1	2	8	8	20	17	62	124
	Male	5	1	1	7	7	16	15	45	97
	Female	1	0	1	1	1	4	2	17	27
5th Year	Total	1	0	2	1	1	6	3	20	34
	Male	1	0	1	1	1	6	2	14	26
	Female	0	0	1	0	0	0	1	6	8
6th Year	Total	-	-	-	-	-	-	1	5	6
	Male	-	-	-	-	-	-	0	4	4
	Female	-	-	-	-	-	-	1	1	2
7th+ Years	Total	-	-	-	-	-	-	-	8	8
	Male	-	-	-	-	-	-	-	5	5
	Female	-	-	-	-	-	-	-	3	3
Total	Total	753	277	252	206	256	174	100	250	2268
	Male	548	204	188	155	200	129	71	177	1672
	Female	205	73	64	51	56	45	29	73	596



APPENDIX 25

NUMBER OF COURSES PASSED BY DROP-OUTS OF 1971 - 1976 FIRST-YEAR INTAKES ACCORDING TO FACULTY, MALE, FEMALE, TOTAL

FACULTY	SEX	NUMBER OF STUDENTS PASSING								TOTAL
		0 Courses	1 Course	2 Courses	3 Courses	4 Courses	5 Courses	6 Courses	7+ Courses	
Arts	Total	222	80	66	61	37	49	16	65	596
	Male	152	46	39	31	17	23	8	30	346
	Female	70	34	27	30	20	26	8	35	250
Commerce	Total	132	75	84	58	49	61	36	83	578
	Male	113	61	70	49	43	53	29	71	489
	Female	19	14	14	9	6	8	7	12	89
Education	Total	94	19	17	14	21	13	11	18	207
	Male	55	14	9	10	10	9	7	9	123
	Female	39	5	8	4	11	4	4	9	84
Law	Total	13	11	11	15	8	12	7	39	116
	Male	10	10	10	13	7	10	4	32	96
	Female	3	1	1	2	1	2	3	7	20
Science	Total	292	92	74	58	141	39	30	45	771
	Male	218	73	60	52	123	34	23	35	618
	Female	74	19	14	6	18	5	7	10	153
Total	Total	753	277	252	206	256	174	100	250	2268
	Male	548	204	188	155	200	129	71	177	1672
	Female	205	73	64	51	56	45	29	73	596

APPENDIX 26

## DISTRIBUTION OF GRADUATES FROM 1971 - 1976 FIRST-YEAR ADMISSIONS

FACULTY	DEGREE/ DIPLOMA	TOTAL	FULL-TIME			PART-TIME			TOTAL	
			Total	Male	Female	Total	Male	Female	Male	Female
Arts	Degree	464	401	165	236	63	52	11	217	247
	Diploma	16	16	10	6	0	0	0	10	6
	Total	480	417	175	242	63	52	11	227	253
Commerce	Degree	335	332	293	39	3	3	0	296	39
	Diploma	5	5	4	1	-	-	-	4	1
	Total	340	337	297	40	3	3	0	300	40
Education	Degree	115	115	52	63	-	-	-	52	63
	Diploma	283	283	142	141	-	-	-	142	141
	Total	398	398	194	204	-	-	-	194	204
Law	Degree	19	19	15	4	-	-	-	15	4
Science	Degree	296	296	215	81	-	-	-	215	81
	Total Degree	1229	1163	740	423	66	55	11	795	434
	Total Diploma	304	304	156	148	0	0	0	156	148
	Grand Total	1533	1467	896	571	66	55	11	951	582

## APPENDIX 27

## DISTRIBUTION OF DROP-OUTS FROM 1971 - 1976 FIRST-YEAR ADMISSIONS

FACULTY	DEGREE/ DIPLOMA	TOTAL	FULL-TIME			PART-TIME			TOTAL	
			Total	Male	Female	Total	Male	Female	Male	Female
Arts	Degree	532	391	222	169	141	98	43	320	212
	Diploma	64	64	26	38	0	0	0	26	38
	Total	596	455	248	207	141	98	43	346	250
Commerce	Degree	522	471	396	75	51	46	5	442	80
	Diploma	56	56	47	9	0	0	0	47	9
	Total	578	527	443	84	51	46	5	489	89
Education	Degree	98	98	61	37	-	-	-	61	37
	Diploma	109	109	62	47	-	-	-	62	47
	Total	207	207	123	84	-	-	-	123	84
Law	Degree	116	116	96	20	-	-	-	96	20
Science	Degree	771	771	618	153	-	-	-	618	153
	Total Degree	2039	1847	1393	454	192	144	48	1537	502
	Total Diploma	229	229	135	94	0	0	0	135	94
	Grand Total	2268	2076	1528	548	192	144	48	1672	596



## GRADUATES OF 1971 - 1976 FIRST-YEAR INTAKES AND PROVINCE OF MATRICULATION

FACULTY	PROVINCE	DEGREE			DIPLOMA			TOTAL		
		Total	Male	Female	Total	Male	Female	Total	Male	Female
Arts	Not Indicated							13	9	4
	Natal	388	178	210	9	4	5	397	182	215
	Transvaal	32	16	16				32	16	16
	Cape	31	17	14				31	17	14
	Other	7	3	4				7	3	4
Commerce	Not Indicated									
	Natal	229	194	35	5	4	1	234	198	36
	Transvaal	97	94	3				97	94	3
	Cape	6	5	1				6	5	1
	Other	3	3	0				3	3	0
Education	Not Indicated							5	1	4
	Natal	111	59	52	276	149	127	387	208	179
	Transvaal	1	0	1				1	0	1
	Cape	2	1	1	2	1	1	4	2	2
	Other	1	1	0				1	1	0
Law	Not Indicated									
	Natal	16	12	4				16	12	4
	Transvaal	2	2	0				2	2	0
	Cape	-	-	-				-	-	-
	Other	1	1	0				1	1	0
Science	Not Indicated									
	Natal	215	148	67				215	148	67
	Transvaal	59	50	9				59	50	9
	Cape	19	14	5				19	14	5
	Other	3	3	0				3	3	0

## APPENDIX 28 B

DROPOUTS FROM 1971 - 1976 FIRST-YEAR INTAKES AND PROVINCE OF MATRICULATION

FACULTY	PROVINCE	DEGREE			DIPLOMA			TOTAL		
		Total	Male	Female	Total	Male	Female	Total	Male	Female
Arts	Not Indicated							19	13	6
	Natal	425	256	169	54	19	35	479	275	204
	Transvaal	57	34	23	3	1	2	60	35	25
	Cape	22	10	12	1	1	0	23	11	12
	Other	13	10	3	2	2	0	15	12	3
Commerce	Not Indicated							8	6	2
	Natal	383	319	64	47	39	8	430	358	72
	Transvaal	99	89	10	6	5	1	105	94	11
	Cape	24	21	3	3	3	0	27	24	3
	Other	8	7	1	0	0	0	8	7	1
Education	Not Indicated							51	31	20
	Natal	65	38	27	78	44	34	143	82	61
	Transvaal	3	2	1	2	1	1	5	3	2
	Cape	5	5	0	2	1	1	7	6	1
	Other	1	1	0	-	-	-	1	1	0
Law	Not Indicated									
	Natal	75	58	17	-	-	-	75	58	17
	Transvaal	27	24	3	-	-	-	27	24	3
	Cape	11	11	0	-	-	-	11	11	0
	Other	3	3	0	-	-	-	3	3	0
Science	Not Indicated							7	5	2
	Natal	492	386	106	-	-	-	492	386	106
	Transvaal	201	165	36	-	-	-	201	165	36
	Cape	56	49	7	-	-	-	56	49	7
	Other	15	13	2	-	-	-	15	13	2

APPENDIX 29 A

COMMUTER DISTANCE AND GRADUATES FROM 1971 - 1976 FIRST-YEAR STUDENTS

DISTANCE IN KILOMETRES	DEGREE					DIPLOMA			TOTAL				
	Total	Full- Time	Part- Time	Male	Female	Total	Male	Female	Total	Full- Time	Part- Time	Male	Female
0	327	327	0	223	104	37	17	20	364	364	0	240	124
1-10	556	527	29	338	218	114	60	54	670	641	29	398	272
11-20	92	89	3	62	30	50	24	26	142	139	3	86	56
21-35	214	192	22	140	74	97	50	47	311	289	22	190	121
35+	34	25	9	27	7	4	3	1	38	29	9	30	8
Not Indicated	6	3	3	5	1	2	2	0	8	5	3	7	1
<b>TOTAL</b>	<b>1229</b>	<b>1163</b>	<b>66</b>	<b>795</b>	<b>434</b>	<b>304</b>	<b>156</b>	<b>148</b>	<b>1533</b>	<b>1467</b>	<b>66</b>	<b>951</b>	<b>582</b>

APPENDIX 29 B

COMMUTER DISTANCE AND DROP-OUTS FROM 1971 - 1976 FIRST-YEAR STUDENTS

DISTANCE IN KILOMETRES	DEGREE					DIPLOMA			TOTAL				
	Total	Full- Time	Part- Time	Male	Female	Total	Male	Female	Total	Full- Time	Part- Time	Male	Female
0	586	586	0	434	152	24	17	7	610	610	0	451	159
1-10	819	727	92	598	221	101	51	50	920	828	92	649	271
11-20	179	160	19	136	43	34	22	12	213	194	19	158	55
21-35	376	315	61	312	64	62	39	23	438	377	61	351	87
35+	58	44	14	40	18	6	4	2	64	50	14	44	20
Not Indicated	21	15	6	17	4	2	2	0	23	17	6	19	4
<b>TOTAL</b>	<b>2039</b>	<b>1847</b>	<b>192</b>	<b>1537</b>	<b>502</b>	<b>229</b>	<b>135</b>	<b>94</b>	<b>2268</b>	<b>2076</b>	<b>192</b>	<b>1672</b>	<b>596</b>



APPENDIX 30 A

HOME LANGUAGE AND GRADUATES FROM FIRST-YEAR STUDENTS : 1971 - 1976

DEGREE/ DIPLOMA	SEX	NUMBER OF STUDENTS WHOSE HOME LANGUAGE IS :									
		1 Afrikaans	2 Afrikaans & English	3 English	4 Gujerati	5 Hindi	6 Memon	7 Tamil	8 Telegu	9 Urdu	Not Indicated
Degree	Total	6	22	587	247	104	38	90	26	47	62
	Male	5	15	358	165	77	27	51	20	29	38
	Female	1	7	229	82	27	11	39	6	18	24
Diploma	Total	0	0	154	20	46	1	37	9	6	31
	Male	0	0	75	8	27	0	20	6	4	16
	Female	0	0	79	12	19	1	17	3	2	15
Total	Total	6	22	741	267	150	39	127	35	53	93
	Male	5	15	433	173	104	27	71	26	33	54
	Female	1	7	308	94	46	12	56	9	20	39

APPENDIX 30 B

HOME LANGUAGE AND DROP-OUTS FROM FIRST-YEAR STUDENTS : 1971 - 1976

DEGREE/ DIPLOMA	SEX	NUMBER OF STUDENTS WHOSE HOME LANGUAGE IS :									
		1 Afrikaans	2 Afrikaans & English	3 English	4 Gujerati	5 Hindi	6 Memon	7 Tamil	8 Telegu	9 Urdu	Not Indicated
Degree	Total	12	46	1024	316	161	51	150	53	70	156
	Male	12	41	777	230	115	38	112	36	49	127
	Female	0	5	247	86	46	13	38	17	21	29
Diploma	Total	0	1	124	15	26	3	22	4	5	29
	Male	0	0	72	8	20	3	10	2	2	18
	Female	0	1	52	7	6	0	12	2	3	11
Total	Total	12	47	1148	331	187	54	172	57	75	185
	Male	12	41	849	238	135	41	122	38	51	145
	Female	0	6	299	93	52	13	50	19	24	40

## APPENDIX 31 A

## AGE AND GRADUATES FROM 1971 - 1976 FIRST-YEAR STUDENTS

DEGREE/ DIPLOMA	SEX	NUMBER OF STUDENTS WHOSE AGES IN YEARS ARE :								
		≤17	18	19	20	21	22-25	26-30	31+	Not Indicated
Degree	Total	124	451	348	130	46	51	17	25	36
	Male	68	271	219	97	36	40	15	19	30
	Female	56	180	129	33	10	11	2	6	6
Diploma	Total	10	97	82	70	28	6	-	5	6
	Male	3	46	38	41	18	2	-	5	3
	Female	7	51	44	29	10	4	-	-	3
Total	Total	134	548	430	200	74	57	17	30	42
	Male	71	317	257	138	54	42	15	24	33
	Female	63	231	173	62	20	15	2	6	9

## APPENDIX 31 B

## AGE AND DROP-OUTS FROM 1971 - 1976 FIRST-YEAR STUDENTS

DEGREE/ DIPLOMA	SEX	NUMBER OF STUDENTS WHOSE AGES IN YEARS ARE :								
		≤17	18	19	20	21	22-25	26-30	31+	Not Indicated
Degree	Total	156	660	502	273	133	155	55	77	28
	Male	105	478	377	219	109	110	45	71	23
	Female	51	182	125	54	24	45	10	6	5
Diploma	Total	6	65	78	48	19	5	0	6	2
	Male	1	35	47	29	14	2	0	6	1
	Female	5	30	31	19	5	3	-	-	1
Total	Total	162	725	580	321	152	160	55	83	30
	Male	106	513	424	248	123	112	45	77	24
	Female	56	212	156	73	29	48	10	6	6



## APPENDIX 32 A

AGE AND GRADUATES FROM 1971 - 1976 FIRST-YEAR STUDENTS ACCORDING TO FACULTY

FACULTY	DEGREE/ DIPLOMA	NUMBER OF STUDENTS WHOSE AGES IN YEARS WERE :								
		17	18	19	20	21	22-25	26-30	31+	Not Indicated
Arts	Degree Diploma	43 0	136 2	130 2	44 3	15 1	38 3	16 -	25 5	17 0
Commerce	Degree Diploma	23 -	119 1	101 2	51 1	19 1	9 -	1 -	0 -	12 -
Education	Degree Diploma	5 10	56 94	37 78	12 66	2 26	1 3	- -	- -	2 6
Law	Degree	1	9	7	1	0	1	-	-	0
Science	Degree	52	131	73	22	10	3	-	-	5

## APPENDIX 32 B

AGE AND DROP-OUTS FROM 1971 - 1976 FIRST-YEAR STUDENTS ACCORDING TO FACULTY

FACULTY	DEGREE/ DIPLOMA	NUMBER OF STUDENTS WHOSE AGES IN YEARS WERE :								
		17	18	19	20	21	22-25	26-30	31+	Not Indicated
Arts	Degree Diploma	27 3	135 19	101 20	66 15	25 1	75 1	30 0	67 4	6 1
Commerce	Degree Diploma	32 0	144 16	130 21	87 13	41 5	54 -	18 -	6 -	10 1
Education	Degree Diploma	6 3	28 30	33 37	13 20	13 13	1 4	0 -	1 2	3 -
Law	Degree	8	34	37	22	10	4			1
Science	Degree	83	319	201	85	44	21	7	3	8



APPENDIX 33.A

MATRICULATION STATUS AND GRADUATES FROM 1971 - 1976 FIRST-YEAR STUDENTS

FACULTY	MATRICULATION STATUS	DEGREE					DIPLOMA			TOTAL				
		Full-Time	Part-Time	Total	Male	Female	Total	Male	Female	Full-Time	Part-Time	Total	Male	Female
Arts	Full Matric. Exemption	376	39	415	186	229	4	1	3	380	39	419	187	232
	Conditional/Mature Age	20	21	41	24	17	2	1	1	22	21	43	25	18
	Sen. Cert. without Exemption	1	1	2	1	1	4	2	2	5	1	6	3	3
	Not Indicated	4	2	6	6	0	6	6	0	10	2	12	12	0
Commerce	Full Matric. Exemption	316	2	318	281	37	0	0	0	316	2	318	281	37
	Conditional/Mature Age	15	1	16	15	1	1	1	0	16	1	17	16	1
	Sen. Cert. without Exemption	0	0	0	0	0	4	3	1	4	0	4	3	1
	Not Indicated	1	0	1	0	1	0	0	0	1	0	1	0	1
Education	Full Matric. Exemption	114	0	114	52	62	80	47	33	194	0	194	99	95
	Conditional/Mature Age	-	-	-	-	-	8	6	2	8	0	8	6	2
	Sen. Cert. without Exemption	1	0	1	0	1	195	89	106	196	0	196	89	107
	Not Indicated	-	-	-	-	-	-	-	-	-	-	-	-	-
Law	Full Matric. Exemption	18	0	18	14	4	-	-	-	18	0	18	14	4
	Conditional/Mature Age	1	0	1	1	0	-	-	-	1	0	1	1	0
	Sen. Cert. without Exemption	-	-	-	-	-	-	-	-	-	-	-	-	-
	Not Indicated	-	-	-	-	-	-	-	-	-	-	-	-	-
Science	Full Matric. Exemption	290	0	290	210	80	-	-	-	290	0	290	210	80
	Conditional/Mature Age	1	0	1	1	0	-	-	-	1	0	1	1	0
	Sen. Cert. without Exemption	-	-	-	-	-	-	-	-	-	-	-	-	-
	Not Indicated	5	0	5	4	1	-	-	-	5	0	5	4	1
Total	Full Matric. Exemption	1114	41	1155	743	412	84	48	36	1198	41	1239	791	448
	Conditional/Mature Age	37	22	59	41	18	11	8	3	48	22	70	49	21
	Sen. Cert. without Exemption	2	1	3	1	2	203	94	109	205	1	206	95	111
	Not Indicated	10	2	12	10	2	6	6	0	16	2	18	16	2
	TOTAL	1163	66	1229	795	434	304	156	148	1467	66	1533	951	582

APPENDIX 33 B

MATRICULATION STATUS AND DROP-OUTS FROM 1971 -1976 FIRST-YEAR STUDENTS

FACULTY	MATRICULATION STATUS	DEGREE					DIPLOMA			TOTAL				
		Full-Time	Part-Time	Total	Male	Female	Total	Male	Female	Full-Time	Part-Time	Total	Male	Female
Arts	Full Matric. Exemption	254	35	289	158	131	4	3	1	258	35	293	161	132
	Conditional/Mature Age	66	75	141	93	48	-	-	-	66	75	141	93	48
	Sen. Cert. without Exemption	11	3	14	8	6	41	12	29	52	3	55	20	35
	Not Indicated	60	28	88	61	27	19	11	8	79	28	107	72	35
Commerce	Full Matric. Exemption	337	11	348	292	56	3	3	0	340	11	351	295	56
	Conditional/Mature Age	86	29	115	102	13	4	3	1	90	29	119	105	14
	Sen. Cert. without Exemption	1	1	2	2	0	29	24	5	30	1	31	26	5
	Not Indicated	47	10	57	46	11	20	17	3	67	10	77	63	14
Education	Full Matric. Exemption	86	0	86	52	34	16	10	6	102	0	102	62	40
	Conditional/Mature Age	1	0	1	1	0	15	7	8	16	0	16	8	8
	Sen. Cert. without Exemption	0	0	0	0	0	55	30	25	55	0	55	30	25
	Not Indicated	11	0	11	8	3	23	15	8	34	0	34	23	11
Law	Full Matric. Exemption	96	0	96	78	18	-	-	-	96	0	96	78	18
	Conditional/Mature Age	14	0	14	13	1	-	-	-	14	0	14	13	1
	Sen. Cert. without Exemption	0	0	0	0	0	-	-	-	0	0	0	0	0
	Not Indicated	6	0	6	5	1	-	-	-	6	0	6	5	1
Science	Full Matric. Exemption	700	0	700	560	140	-	-	-	700	0	700	560	140
	Conditional/Mature Age	7	0	7	7	0	-	-	-	7	0	7	7	0
	Sen. Cert. without Exemption	0	0	0	0	0	-	-	-	0	0	0	0	0
	Not Indicated	64	0	64	51	13	-	-	-	64	0	64	51	13
Total	Full Matric. Exemption	1473	46	1519	1140	379	23	16	7	1496	46	1542	1156	386
	Conditional/Mature Age	174	104	278	216	62	19	10	9	193	104	297	226	71
	Sen. Cert. without Exemption	12	4	16	10	6	125	66	59	137	4	141	76	65
	Not Indicated	188	38	226	171	55	62	43	19	250	38	288	214	74
	TOTAL	1847	192	2039	1537	502	229	135	94	2076	192	2268	1672	596



APPENDIX 34 A

MATRICULATION AGGREGATE AND GRADUATES FROM 1971 - 1976 FIRST-YEAR STUDENTS : DEGREE, DIPLOMA, TOTAL

MATRICULATION AGGREGATE	DEGREE					DIPLOMA			TOTAL				
	Total	Full-Time	Part-Time	Male	Female	Total	Male	Female	Total	Full-Time	Part-Time	Male	Female
A	1	1	0	1	0	0	0	0	1	1	0	1	0
B	3	3	0	3	0	0	0	0	3	3	0	3	0
C	77	76	1	47	30	-	-	-	77	76	1	47	30
D	498	493	5	314	184	29	17	12	527	522	5	331	196
E+	359	347	12	207	152	97	55	42	456	444	12	262	194
E	8	8	0	5	3	159	72	87	167	167	0	77	90
F	-	-	-	-	-	-	-	-	-	-	-	-	-
Not Indicated	283	235	48	218	65	19	12	7	302	254	48	230	72
<b>TOTAL</b>	<b>1229</b>	<b>1163</b>	<b>66</b>	<b>795</b>	<b>434</b>	<b>304</b>	<b>156</b>	<b>148</b>	<b>1533</b>	<b>1467</b>	<b>66</b>	<b>951</b>	<b>582</b>

APPENDIX 34 B

MATRICULATION AGGREGATE AND DROP-OUTS FROM 1971 - 1976 FIRST-YEAR STUDENTS : DEGREE, DIPLOMA, TOTAL

MATRICULATION AGGREGATE	DEGREE					DIPLOMA			TOTAL				
	Total	Full-Time	Part-Time	Male	Female	Total	Male	Female	Total	Full-Time	Part-Time	Male	Female
A	-	-	-	-	-	-	-	-	-	-	-	-	-
B	1	1	0	1	0	0	0	0	1	1	0	1	0
C	106	105	1	84	22	-	-	-	106	105	1	84	22
D	623	617	6	466	157	20	17	3	643	637	6	483	160
E+	546	523	23	387	159	23	15	8	569	546	23	402	167
E	16	11	5	10	6	94	48	46	110	105	5	58	52
F	-	-	-	-	-	21	8	13	21	21	-	8	13
Not Indicated	747	590	157	589	158	71	47	24	818	661	157	636	182
<b>TOTAL</b>	<b>2039</b>	<b>1847</b>	<b>192</b>	<b>1537</b>	<b>502</b>	<b>229</b>	<b>135</b>	<b>94</b>	<b>2268</b>	<b>2076</b>	<b>192</b>	<b>1672</b>	<b>596</b>



APPENDIX 35 A

MATRICULATION AGGREGATE AND GRADUATES FROM 1971 - 1976 FIRST-YEAR INTAKES ACCORDING TO FACULTY

FACULTY	MATRIC AGGREGATE	DEGREE					DIPLOMA			TOTAL				
		Total	Full-Time	Part-Time	Male	Female	Total	Male	Female	Total	Full-Time	Part-Time	Male	Female
Arts	A/B	1	1	0	1	0	-	-	-	1	1	0	1	0
	C	13	12	1	4	9	-	-	-	13	12	1	4	9
	D	162	157	5	70	92	1	0	1	163	158	5	70	93
	E+	153	142	11	56	97	5	3	2	158	147	11	59	99
	E/F	3	3	0	1	2	2	0	2	5	5	0	1	4
	Not Indicated	132	86	46	85	47	8	7	1	140	94	46	92	48
Commerce	A/B	0	0	0	0	0	0	0	0	0	0	0	0	0
	C	13	13	0	10	3	-	-	-	13	13	0	10	3
	D	116	116	0	102	14	-	-	-	116	116	0	102	14
	E+	102	101	1	88	14	-	-	-	102	101	1	88	14
	E/F	5	5	0	4	1	5	4	1	10	10	0	8	2
	Not Indicated	99	97	2	92	7	-	-	-	99	97	2	92	7
Education	A/B	1	1	0	1	0	-	-	-	1	1	0	1	0
	C	5	5	0	5	0	-	-	-	5	5	0	5	0
	D	56	56	0	28	28	28	17	11	84	84	0	45	39
	E+	44	44	0	14	30	92	52	40	136	136	0	66	70
	E/F	0	0	0	0	0	152	68	84	152	152	0	68	84
	Not Indicated	9	9	0	4	5	11	5	6	20	20	0	9	11
Law	A/B	0	0	0	0	0	-	-	-	0	0	0	0	0
	C	0	0	0	0	0	-	-	-	0	0	0	0	0
	D	5	5	0	3	2	-	-	-	5	5	0	3	2
	E+	10	10	0	8	2	-	-	-	10	10	0	8	2
	E/F	0	0	0	0	0	-	-	-	0	0	0	0	0
	Not Indicated	4	4	0	4	0	-	-	-	4	4	0	4	0
Science	A/B	2	2	0	2	0	-	-	-	2	2	0	2	0
	C	46	46	0	28	18	-	-	-	46	46	0	28	18
	D	159	159	0	111	48	-	-	-	159	159	0	111	48
	E+	50	50	0	41	9	-	-	-	50	50	0	41	9
	E/F	0	0	0	0	0	-	-	-	0	0	0	0	0
	Not Indicated	39	39	0	33	6	-	-	-	39	39	0	33	6

APPENDIX 35 B

MATRICULATION AGGREGATE AND DROP-OUTS FROM 1971 - 1976 FIRST-YEAR STUDENTS ACCORDING TO FACULTY

FACULTY	MATRIC AGGREGATE	DEGREE					DIPLOMA			TOTAL				
		Total	Full-Time	Part-Time	Male	Female	Total	Male	Female	Total	Full-Time	Part-Time	Male	Female
Arts	A/B	0	0	0	0	0	0	0	0	0	0	0	0	0
	C	9	8	1	5	4	-	-	-	9	8	1	5	4
	D	101	97	4	49	52	2	2	0	103	99	4	51	52
	E+	129	115	14	67	62	3	1	2	132	118	14	68	64
	E/F	12	8	4	6	6	38	10	28	50	46	4	16	34
	Not Indicated	281	163	118	193	88	21	13	8	302	184	118	206	96
Commerce	A/B	0	0	0	0	0	0	0	0	0	0	0	0	0
	C	7	7	0	6	1	-	-	-	7	7	0	6	1
	D	120	118	2	97	23	6	6	0	126	124	2	103	23
	E+	160	151	9	130	30	4	4	0	164	155	9	134	30
	E/F	4	3	1	4	0	24	18	6	28	27	1	22	6
	Not Indicated	231	192	39	205	26	22	19	3	253	214	39	224	29
Education	A/B	0	0	0	0	0	0	0	0	0	0	0	0	0
	C	4	4	0	4	0	0	0	0	4	4	0	4	0
	D	46	46	0	30	16	12	9	3	58	58	0	39	19
	E+	29	29	0	16	13	16	10	6	45	45	0	26	19
	E/F						53	28	25	53	53	0	28	25
	Not Indicated	19	19	0	11	8	28	15	13	47	47	0	26	21
Law	A/B	0	0	0	0	0	-	-	-	0	0	0	0	0
	C	5	5	0	5	0	-	-	-	5	5	0	5	0
	D	33	33	0	29	4	-	-	-	33	33	0	29	4
	E+	44	44	0	32	12	-	-	-	44	44	0	32	12
	E/F	0	0	0	0	0	-	-	-	0	0	0	0	0
	Not Indicated	34	34	0	30	4	-	-	-	34	34	0	30	4
Science	A/B	1	1	0	1	0	-	-	-	1	1	0	1	0
	C	81	81	0	64	17	-	-	-	81	81	0	64	17
	D	323	323	0	261	62	-	-	-	323	323	0	261	62
	E+	184	184	0	142	42	-	-	-	184	184	0	142	42
	E/F	0	0	0	0	0	-	-	-	0	0	0	0	0
	Not Indicated	182	182	0	150	32	-	-	-	182	182	0	150	32



APPENDIX 36

DISTRIBUTION OF MATRICULATION SUBJECT SYMBOLS ACCORDING TO FACULTY FOR GRADUATES AND DROP-OUTS : 1971 - 1976 FIRST-YEAR STUDENTS

SUBJECT	FACULTY	GROUP	SYMBOLS					
			A	B	C	D	E	F
English	Arts	Graduates	2	5	41	130	121	2
		Drop-Outs	1	4	26	86	131	2
	Commerce	Graduates		1	1	60	147	1
		Drop-Outs			6	63	199	5
	Education	Graduates			17	117	228	3
		Drop-Outs			2	47	100	
	Law	Graduates			1	4	10	
		Drop-Outs			5	33	37	
	Science	Graduates		1	17	90	114	
		Drop-Outs		1	4	41	180	281
Mathematics	Arts	Graduates	3	2	21	72	115	37
		Drop-Outs	3	6	12	52	85	21
	Commerce	Graduates	5	14	39	77	54	11
		Drop-Outs	2	8	41	79	86	9
	Education	Graduates	1	5	17	60	120	55
		Drop-Outs	1	4	14	29	45	16
	Law	Graduates				5	6	1
		Drop-Outs			6	14	28	7
	Science	Graduates	16	25	77	73	29	
		Drop-Outs	26	49	140	157	122	4
Afrikaans	Arts	Graduates	1	-	16	49	113	10
		Drop-Outs		2	5	34	92	28
	Commerce	Graduates		1	3	24	84	14
		Drop-Outs			5	24	132	32
	Education	Graduates			2	49	154	48
		Drop-Outs			5	28	56	19
	Law	Graduates				2	9	
		Drop-Outs			4	14	42	5
	Science	Graduates		2	11	35	96	5
		Drop-Outs	1	6	20	81	260	25
History	Arts	Graduates	6	16	66	63	27	4
		Drop-Outs	7	11	31	45	42	1
	Commerce	Graduates	3	2	10	21	16	1
		Drop-Outs	1	4	11	18	26	1
	Education	Graduates	2	9	43	57	50	9
		Drop-Outs	1	3	17	20	13	6
	Law	Graduates		1	1	3	4	
		Drop-Outs	5	5	15	13		
	Science	Graduates	5	9	30	29	26	1
		Drop-Outs	6	25	49	58	45	3

SUBJECT	FACULTY	GROUP	SYMBOLS					
			A	B	C	D	E	F
Physical Science	Arts	Graduates			9	22	28	5
		Drop-Outs		1	3	13	31	4
	Commerce	Graduates		1	13	30	20	
		Drop-Outs		1	6	30	37	3
	Education	Graduates		1	5	14	24	13
		Drop-Outs			3	14	15	2
Law	Graduates				3	0	1	
	Drop-Outs		1	2	3	12	2	
Science	Graduates	4	9	39	43	15		
	Drop-Outs	3	16	88	116	70	7	
Mathematics	Arts	Graduates		2	27	88	108	17
		Drop-Outs		1	13	59	96	9
	Commerce	Graduates			15	56	63	5
		Drop-Outs		1	10	60	104	25
	Education	Graduates		2	11	70	153	49
		Drop-Outs			10	27	58	15
Law	Graduates				5	5		
	Drop-Outs		1	2	13	30	5	
Science	Graduates		1	44	73	33	2	
	Drop-Outs		7	57	136	112	10	
Geography	Arts	Graduates	1	7	24	81	99	19
		Drop-Outs		1	23	47	82	15
	Commerce	Graduates	1	2	12	46	74	28
		Drop-Outs		2	11	50	80	34
	Education	Graduates		8	18	66	136	43
		Drop-Outs		1	6	27	42	24
Law	Graduates			1	7	4	1	
	Drop-Outs	1	-	2	8	20	7	
Science	Graduates		3	21	45	68	19	
	Drop-Outs	2	8	25	90	117	35	
History	Arts	Graduates	2	4	16	34	18	5
		Drop-Outs	3	3	15	29	21	2
	Commerce	Graduates	10	34	44	44	8	1
		Drop-Outs	3	18	65	49	25	1
	Education	Graduates	2	11	35	47	43	9
		Drop-Outs	2	5	10	24	8	1
Law	Graduates			2	1	1	1	
	Drop-Outs	1		1	3	1	11	
Science	Graduates		6	19	40	33	9	
	Drop-Outs	19	27	61	82	38	6	



APPENDIX 37 A

GRADUATES AND THE NUMBER FAILING 1; 2; 3; ..... 8; 9+ COURSES ACCORDING TO FACULTY : 1971 - 1976  
FIRST-YEAR INTAKES

FACULTY	DEGREE/ DIPLOMA	NUMBER OF STUDENTS FAILING									
		0 Courses	1 Course.	2 Courses	3 Courses	4 Courses	5 Courses	6 Courses	7 Courses	8 Courses	9+ Courses
Arts	Degree	143	97	78	55	42	14	21	11	2	1
	Diploma	9	2	0	2	1	0	1	0	1	0
	Total	152	99	78	57	43	14	22	11	3	1
Commerce	Degree	79	54	53	52	37	21	23	9	7	-
	Diploma	-	-	5	-	-	-	-	-	-	-
	Total	79	54	58	52	37	21	23	9	7	-
Education	Degree	35	34	14	19	3	4	4	2	-	-
	Diploma	116	55	48	33	12	10	6	1	2	-
	Total	151	89	62	52	15	14	10	3	2	-
Law	Degree	5	3	5	3	2	0	1	0	0	
Science	Degree	70	69	55	43	32	10	10	2	5	0

APPENDIX 37 B

DROP-OUTS : THE NUMBER FAILING 1; 2; 3; 4; ..... 8; 9+ COURSES ACCORDING TO FACULTY : 1971-1976  
FIRST-YEAR INTAKES

FACULTY	DEGREE/ DIPLOMA	NUMBER OF STUDENTS FAILING									
		0 Courses	1 Course	2 Courses	3 Courses	4 Courses	5 Courses	6 Courses	7 Courses	8 Courses	9+ Courses
Arts	Degree	90	78	84	58	31	34	16	7	7	3
	Diploma	5	9	8	8	8	4	3	1	-	-
	Total	95	87	92	66	39	38	19	8	7	3
Commerce	Degree	21	85	86	72	52	38	29	17	12	20
	Diploma	4	10	9	8	6	2	2			
	Total	25	95	95	80	58	40	31	17	12	20
Education	Degree	36	10	15	12	6	7	8	2	1	1
	Diploma	55	9	13	13	5	4	4	2	1	3
	Total	91	19	28	25	11	11	12	4	2	4
Law	Degree	15	19	15	10	17	13	6	5	4	3
Science	Degree	130	97	104	111	69	35	26	6	8	6

APPENDIX 38

NUMBER OF XDPS RECEIVED BY STUDENTS OF THE 1973 - 1975 FIRST-YEAR COHORTS ACCORDING TO FACULTY

FACULTY	DEGREE/ DIPLOMA	GROUP	NUMBER OF STUDENTS RECEIVING :						TOTAL
			0 Xdps	1 Xdp	2 Xdps	3 Xdps	4 Xdps	4+ Xdps	
Arts	Degree	Total	253	87	50	27	15	8	440
		Male	111	43	26	16	9	7	212
		Female	142	44	24	11	6	1	228
	Diploma	Total	11	4	3	0	0	3	21
		Male	8	3	2	0	0	2	15
		Female	3	1	1	0	0	1	6
Commerce	Degree	Total	218	81	55	27	13	14	408
		Male	189	70	51	23	12	12	357
		Female	29	11	4	4	1	2	51
	Diploma	Total	16	6	2	0	2	0	26
		Male	12	5	2	0	2	0	21
		Female	4	1					5
Education	Degree	Total	61	21	5	3	1	2	93
		Male	36	10	3	1	1	0	51
		Female	25	11	2	2	0	2	42
	Diploma	Total	166	31	1	4	1	8	211
		Male	83	19	0	2	1	5	110
		Female	83	12	1	2	0	3	101
Law	Degree	Total	16	22	9	12	7	10	76
		Male	10	16	8	10	4	10	58
		Female	6	6	1	2	3	0	18
Science	Degree	Total	334	91	58	37	12	7	539
		Male	260	65	41	34	10	7	417
		Female	74	26	17	3	2	0	122
	Total Degree		882	302	177	106	48	41	1556
	Total Diploma		193	41	6	4	3	11	258
	Total Degree and Diploma		1075	343	183	110	51	51	1814

APPENDIX 39 A

NUMBER OF XDPS RECEIVED BY GRADUATES OF 1971 - 1976 FIRST-YEAR INTAKES

FACULTY	DEGREE/ DIPLOMA	NUMBER OF STUDENTS RECEIVING					
		0 Xdps	1 Xdp	2 Xdps	3 Xdps	4 Xdps	5 Xdps
Arts	Degree	141	45	22	10	6	3
	Diploma	4	2	0	0	0	1
	Total	145	47	22	10	6	4
Commerce	Degree	109	22	7	7	1	0
	Diploma	3	1	0	0	0	0
	Total	112	23	7	7	1	0
Education	Degree	38	9	3	1	0	0
	Diploma	109	25	0	3	0	7
	Total	147	34	3	4	0	7
Law	Degree	3	2	2	1	1	1
Science	Degree	108	26	8	4	1	1

APPENDIX 39 B

NUMBER OF XDPS RECEIVED BY DROP-OUTS OF 1971 - 1976 FIRST-YEAR INTAKES

FACULTY	DEGREE/ DIPLOMA	NUMBER OF STUDENTS RECEIVING					
		0 Xdps	1 Xdp	2 Xdps	3 Xdps	4 Xdps	5 Xdps
Arts	Degree	163	38	28	16	5	2
	Diploma	7	2	3	0	0	2
	Total	170	40	31	16	5	4
Commerce	Degree	158	45	34	10	10	13
	Diploma	13	5	2	0	2	0
	Total	171	50	36	10	12	13
Education	Degree	24	11	1	2	0	0
	Diploma	46	5	1	1	0	0
	Total	70	16	2	3	0	0
Law	Degree	17	19	6	11	5	8
Science	Degree	299	51	34	22	6	4