EFFECTIVE MANAGEMENT OF STUDENT AFFAIRS IN HIGHER EDUCATION: A STUDY OF FINANCIAL AID

by

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in the subject

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at the

UNIVERSITY OF SOUTH AFRICA

SUPERVISOR: DR R J BOTHA

JUNE 1999
Dedicated to my parents
Clement and Francina.
DECLARATION

Student number: 449-675-2

I declare that "Effective Management of Student Affairs in Higher Education: A Study of Financial Aid" is my own work and that all the sources that I have used or quoted have been indicated and acknowledged by means of complete references.

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SIGNATURE              DATE
ACKNOWLEDGEMENTS

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SUMMARY

EFFECTIVE MANAGEMENT OF STUDENT AFFAIRS IN HIGHER EDUCATION: A STUDY OF FINANCIAL AID

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Degree: Master of Education
Department: Educational Management
University: University of South Africa
Supervisor: Dr RJ Botha

Tertiary education campuses are no more the heart of peacefulness and scholastic study. They are turned into battlefields, administration and lecture hall buildings become the objects of siege, invasion and occupation. This is caused by the demands by students for adequate financial aid, the declining financial resources from government and the government’s call for more access to tertiary education especially for the historically disadvantaged students.

The problems in tertiary education pertain not only to financial problems, they also include cultural diversity, social and political issues. The financial aid to tertiary institutions is the main theme in this research. The research is based on a study of international and South African tertiary education systems in order to find ways to manage student affairs in tertiary education effectively and efficiently and to establish management strategies that will be acceptable to students, management, parents, all stakeholders and interest groups. In the end the management in tertiary education institutions should be able to effect the transformation based on the profound deficiencies of the present system which inhibit Higher Education’s ability to meet the moral, social and economic demands of the new South Africa in the context of national and global opportunities and challenges.
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<td>ABSA</td>
<td>Amalgamated Banks of South Africa</td>
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<td>ANC</td>
<td>African National Congress</td>
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<tr>
<td>CAE</td>
<td>College of Advanced Education</td>
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<td>CPC</td>
<td>Conservative Political Centre</td>
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<td>CVCP</td>
<td>Committee of Vice-chancellors and Principals</td>
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<td>DEET</td>
<td>Department of Employment, Education and Training</td>
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<td>DHE</td>
<td>Department of Higher Education</td>
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<td>DP</td>
<td>Democratic Party</td>
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<td>EDT</td>
<td>Education Development Trust</td>
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<tr>
<td>EFTSU</td>
<td>Equivalent Full-time Student Units</td>
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<td>EU</td>
<td>European Union</td>
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<td>FICL</td>
<td>Fees Income Contingent Loan</td>
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<td>FF</td>
<td>Freedom Front</td>
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<td>GTZ</td>
<td>German Government and Agency</td>
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<td>HBCU</td>
<td>Historically Black Colleges and Universities</td>
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<td>HBU</td>
<td>Historically Black University</td>
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<td>HECS</td>
<td>Higher Education Contribution Scheme</td>
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<td>HEFCE</td>
<td>Higher Education Funding Council of England</td>
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<td>HEI</td>
<td>Higher Education Institution</td>
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<td>HWU</td>
<td>Historically White University</td>
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<td>IDA</td>
<td>Independent Donor Agency</td>
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<td>IDT</td>
<td>Independent Development Trust</td>
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<tr>
<td>MEDUNSA</td>
<td>Medical University of Southern Africa</td>
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<td>NAB</td>
<td>National Advisory Board</td>
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<td>NBEET</td>
<td>National Board of Employment, Education and Training</td>
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<td>NCES</td>
<td>National Centre for Education Statistics</td>
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<td>NORAD</td>
<td>Netherlands Government Agency</td>
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<td>NSFAS</td>
<td>National Student Financial Aid Scheme</td>
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<tr>
<td>OECD</td>
<td>Organization for Economic Cooperation and Development</td>
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<tr>
<td>ODA</td>
<td>Overseas Development Administration</td>
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<tr>
<td>PCFC</td>
<td>Polytechnic and College Funding Council</td>
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<tr>
<td>PSHE</td>
<td>Public Sector Higher Education</td>
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<tr>
<td>RAU</td>
<td>Randse Afrikaanse Universiteit</td>
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<tr>
<td>Acronym</td>
<td>Description</td>
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<tr>
<td>SAGDA</td>
<td>South African Graduates Development Association</td>
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<td>SAUVCA</td>
<td>South African University Vice-chancellors Association</td>
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<td>SAPSE</td>
<td>South African Post-secondary Education</td>
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<td>SAREC</td>
<td>Swedish Agency for Research Cooperation with Developing Countries</td>
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<td>SASCO</td>
<td>South African Student Congress</td>
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<tr>
<td>SOLAR</td>
<td>Solicitation and Alumni Records</td>
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<td>SRC</td>
<td>Student Representative Council</td>
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<td>TEF</td>
<td>Tertiary Education Fund</td>
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<td>TEFSA</td>
<td>Tertiary Education Funding of South Africa</td>
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<tr>
<td>TQM</td>
<td>Total Quality Management</td>
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<tr>
<td>UCT</td>
<td>University of Cape Town</td>
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<td>UDSM</td>
<td>University of Dar Es Salaam</td>
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<td>UFC</td>
<td>University Funding Council</td>
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<td>UFS</td>
<td>University of Free State</td>
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<td>UGC</td>
<td>University Grant Committee</td>
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<tr>
<td>UK</td>
<td>United Kingdom</td>
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<tr>
<td>UNESCO</td>
<td>United Nations Educational, Scientific and Cultural Organization</td>
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<tr>
<td>UNISA</td>
<td>University of South Africa</td>
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<tr>
<td>UNIVEN</td>
<td>University of Venda</td>
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<tr>
<td>UP</td>
<td>University of Pretoria</td>
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<tr>
<td>USA</td>
<td>United States of America</td>
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<tr>
<td>UWC</td>
<td>University of Western Cape</td>
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KEY TERMS

Tertiary education, higher education, funding schemes, graduate tax, student loans, government funding, private funding, repayment mechanism, income-contingent, student affairs and effective management.
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CHAPTER 1

ORIENTATION TO THE STUDY
1.1 Introduction

The student affairs field presently faces enormous pressures - budget cuts, downsizing, growing student unrest, corruption, financial mismanagement and rapid development in technology (Ward 1995:35). There is an ever increasing public outcry for more accountability and quality in tertiary educational institutions. This call comes from parents who pay tuition fees, legislative leaders facing greater public demand for services and programmes, and students choosing their post-secondary institutions (Scott 1996:71). Of the many problems faced by tertiary education in countries throughout the world, the most serious and deep-rooted relate to financial aid (Harman 1991:1).

In this country (South Africa) the debate on student financial aid may be dominated by the redress of past imbalances, but the fact remains that there is still a financial crisis caused by mismanagement of finance and by corruption. At the University of Zululand officials were involved in corruption totalling R640 000. Diplomas and degrees were sold for up to R5 000 a piece (Sowetan 1997:11). The principal of the North West Technikon admitted using R7.5 million to buy flats in Pretoria to accommodate students, without the approval of the Technikon Council (Sowetan 1997:2).

The financial management of tertiary institutions as part of student affairs needs to be controlled effectively. "Budget cuts and downsizing" (Ward 1995:35) must be implemented in a changing South Africa and shrinking job market, which means that our children will need the best education to compete in the job market. But the cost of education is rising faster than the inflation rate, meaning that for many South African families their ability to fund even public primary and secondary school education for their children will be jeopardized (Sowetan 1997:21). An ordinary three-year university degree today costs about R22 000. By 2004 it is estimated it will cost around R55 000 (Sowetan 1997:2). This year a B. Comm degree will cost students R31 313 over a three-year period. By 2014 the amount will have increased to R158 271 (Mittner 1997:13).
In South Africa more than a decade has passed since colleges and universities were a hotbed of angry student protest against financial inequalities and mismanagement. What started as small, isolated pockets of dissent, rapidly grew to incredible proportions, ultimately spreading to almost every university campus. In retrospect it seems that this explosion of university and college student anger was neither expected nor fully understood by those in power (Lopez 1986:6).

1.2 Actuality of research

Since the mid 1980s the higher education society in South Africa has been aware of a growing financial crisis in tertiary education. Scores of potential students are turned away from post-secondary institutions because they cannot afford to pay. Although this is not totally restricted to African students, it is true that Black students in particular are excluded from higher institutions of learning for financial reasons because of their poor background (Jackson 1994:7).

In the Free State about 300 black students were expelled from the University of Free State because of financial problems (Sowetan 1997:3). At the University of Venda, the Azanian Student Convention protested against the 13 per cent increase in fees (Sowetan 1997:4). All over South Africa universities and technikons are turning away students who cannot pay their fees (Mail and Guardian 1997:5). This crisis is aggravated by the Government cutting subsidies, thus forcing tertiary institutions to raise fees. Therefore those students from poor backgrounds would not be able to attend tertiary institutions and consequently the "massification" of tertiary institutions will fail dismally (Mail and Guardian 1997:5).

The subsidy cuts attracted unlikely faces to the many protest marches, like the University of Witwatersrand Vice-chancellor, Robert Charlton, who joined the students. This implies that the cuts affect not only the students but the management and everyone inside and outside these tertiary institutions. It is true that historically "white" universities received more money from the government or private sector (Mail and Guardian 1997:24). The funds were mismanaged as in the University of Zululand and North West Technikon.
Whether traditionally "white" or "black", South African tertiary institutions' finances should be effectively managed to overcome these problems. There is a need to combat the problem of financial mismanagement. There should be a right formula which will help all needy students irrespective of colour or family background, but the problems of "white" or "black" students or universities should be overcome, because all tertiary institutions are South African for all South Africans (Mail and Guardian 1997:24).

As the first step towards transformation in order to preserve financial sustainability, the University of Free State scrapped 50 academic and non-academic posts. The hardest hit were the Arts and Education departments (Sowetan 1997:6). The debt at the University of Western Cape has reached R50 million in outstanding student fees - an increase of more than one third on last year's debt of R37 million (Pretoria News 1997:6).

Political parties such as the Democratic Party (DP) and the Freedom Front (FF) see the proposed Higher Education Bill as a threat that will lead to abuse of power by the Minister. Under this Bill, the Minister can establish tertiary institutions, decide whether any university, technikon or college should close down, enforce partial or total mergers and "withhold money to enforce compliance of conditions laid down" (Sowetan 1997:6). If passed as it is, the Minister will have enormous power over the financial budget of tertiary institutions and this could lead to a further communication crisis if the Minister is not fully acquainted with the university management. The Minister would be able to protect students and parents from "bogus" tertiary institutions or private colleges but on the other hand, will oppress democratic principles and apply the policy of "buig of bars" (bend or break) with its political connotations (Mail and Guardian 1997:24). The Bill also tends to limit the autonomy of tertiary institutions over money (The Star 1997:6). As for subsidy cuts the Minister of Education, Professor S Bengu, said that the cut in subsidy was not final (Steynberg 1997:2).

1.3 Problem setting

The cost of higher education in South Africa is increasing, yet the expensive tuition fees provide slight relief for some of the country's prominent institutions which are currently facing a serious cash crisis (Keeton 1995:2). Most technikons and universities are under financial pressure from all quarters with millions owed to them in unpaid student loans, increasing the
number of students and decreasing state subsidies (Keeton 1995:2). The subsidy cuts mean
that this year (1997) the University of the Witwatersrand will receive R25 million less, which
implies cuts from 66,2 per cent to 59 per cent (Steynberg 1997:2).

In February 1995 about 250 000 students enrolled for courses at South African universities. A
further 130 000 registered for distance courses. Student numbers have been growing by 5,7
per cent a year at universities and by 18,4 per cent a year at technikons (MacGregor 1995:21).
At the University of Venda students protested against a 13 per cent rise in tuition fees and
called on management to review the increase (Sowetan 1997:4).

The financing crisis is not a new problem for higher education institutions. The fact is that the
funding situation has been deteriorating over the years at the same time as hopes of access to
tertiary education have been increasing (Keeton 1995:2). In 1994 tertiary institutions’ state
subsidies were cut from 80 to 86 per cent (Keeton 1995:2).

But relief is in sight with short- and long-term plans by the State (Keeton 1995:2). The problem
is how the institutions or Government are going to recover the money due. By the end of 1994
students owed about R300 million in unpaid debts to tertiary institutions, in particular formerly
“black” tertiary institutions. The University of the North (Turfllop) was owed R60,6 million,
Vista University R14,5 million. The situation at formerly “white” universities was less critical.
The University of the Witwatersrand (Wits) was owed R5,4 million between 1992 and 1994.
The Rand Afrikaans University (RAU) was owed just less than R1,3 million. Technikons were
also affected, for example the Vaal Triangle Technikon was owed R3,8 million (Keeton
1995:2).

Between 1994 and 1995 the situation improved somewhat. About fifty per cent of the money
due to Turfllop was recovered. Around 30 per cent of debt was recovered by RAU, but by the
start of the 1995 academic year many students could not register because of outstanding fees.
The results of more than 80 per cent of students at Turfllop were held back because of
outstanding fees (Keeton 1995:2).
The Independent Development Trust was involved in assisting students with finance through the Tertiary Education Fund for South Africa (TEFSA), but only 14 000 students out of 180 000 were assisted by the Trust, that is only 10 per cent of all students in South Africa (Smidt 1993:28).

The Minister of Education, Professor S Bengu, established the National Student Financial Aid Scheme (NSFAS). Student enrolment also increased in 1992. White students increased from 107 300 to 118 861, Blacks from 127 023 to 178 565, Indians from 19 134 to 27 115 and Coloureds from 11 229 to 14 836 from 1992 to 1995 (Mittner 1997:10). The Government also cut subsidies of the different provincial education departments. In Gauteng the subsidy was cut by 2.48 per cent, in the Western Cape by 5 per cent (Mittner 1997:10).

The University of Fort Hare was closed because students failed to honour the debt of the previous years (Sowetan 1997:4). About 300 black students were expelled from the University of Free State (Sowetan 1997:9). Many of these students are from disadvantaged communities. The Department of Education Chief Director, Professor Ithumeleng Mosala, says it has been estimated that approximately 70 000 students in higher education need financial aid each year (Bell 1996:20).

Tertiary institutions are also faced with the cost of damage, caused by students during the demonstrations, which amount to R4,9 million: Sethlogelo Technikon R1,6 million, Free State Technikon R850 744, Border Technikon R643 000 and Mangosuthu Technikon R367 000. At universities most of the damage was caused at the University of Western Cape R520 000; Pretoria University, Vista and University of Free State R50 000 each; the University of South Africa (UNISA) R32 538. Losses at the University of Natal amounted to R2 500 and at Rhodes University, R5 500 (Mittner 1997:10). Who will pay for the damage, the students or the government? This will also cause an increase in fees of tertiary education.

There is also the problem of financial mismanagement and corruption. Senior officials at the University of Venda (Univen) negotiated a credit facility of R100 000 without the approval or knowledge of the University Council and submitted travel claims up to R8 000 a month while they were travelling in university transport (Sowetan 1997:4). The institutions of higher education need to develop the capacity, knowledge and skills required for better financial
management to serve students adequately, effectively and efficiently (Sowetan 1997:9). Financial exclusion or expulsion as a result of student debt is a manifestation of unresolved tension between students and institutions and this has culminated in financial crisis (Sowetan 1997:9).

The financial crisis in which South African universities and colleges are now immersed is not peculiar to South Africa - nor are its causes. The story has been repeated throughout the continent over many years (Collins 1997:23). Recently the University of Zambia in Lusaka was shut down for the second time in several months. Angry students protested over delayed payment of food and book allowances. The problem is not only confined to Africa. In 1994 after a study of higher education, the World Bank declared the higher education sector to be in crisis throughout the world, but the crisis in developing countries is more acute (Collins 1997:23). The problem is crystal clear: “There are too many university students relative to the funds available to educate and support them during their studies” (Collins 1997:23).

The main problem addressed in this study is how the institutions or Government are going to recover the money. This question can be sub-divided as follows:

• Do institutions have the capacity and skills required for financial management to serve students effectively and efficiently? What are other countries overseas doing to combat this lack of skills?

• How are Government and tertiary institutions going to prevent the repetition of such financial crises?

• Is there any solution to this financial crisis besides expulsion or exclusion of students from programmes?

• What recommendations can be made to solve these problems?
1.4 Objectives of the study

- The first objective is to look into ways Government and tertiary institutions could recover money owed by students. This study will examine different formulas of repayment implemented by selected tertiary institutions in the developed, developing and the underdeveloped countries. South Africa is one of the developing countries.

- The second objective is to examine student financial aid and mechanisms in place to serve students in South African tertiary institutions. Repayments of loans will also receive attention.

- The third objective is to discuss ways that will prevent a repetition of mistakes of the past and avoiding student expulsion, reduction of posts and exclusion from courses. Measures to counter budget cuts will be dealt with covering aspects such as fund-raising, donors, alumni, students and parents.

- The fourth objective will be to draw conclusions and make recommendations with regard to financial management of student affairs and financial aid to tertiary education.

1.5 Research methods

A literature study is, in most cases, a critique of the state of knowledge on a carefully defined topic (McMillan 1989, 114). A literature study will enable the reader to gain further insights into the topic from the purpose and the results of the study. The literature study includes the review of sources of information such as scholarly books, professional journals, reports, newspapers, monograms, magazines, government documents, theses and dissertations.

The literature study enables the researcher to define and limit the problem of his topic; it will place the student financial status into perspective; avoid unnecessary replication; and enhance logic and coherence (McMillan 1989:115). The literature study has sharpened and deepened my theoretical framework of student affairs and clarified the relationship between "effective management of student affairs in tertiary education" and the work of Dr PL Bredenkamp on a similar topic (Bredenkamp 1996). The literature study also helped me to
identify gaps in knowledge in previous studies to determine what has already been done and what is yet to be studied or improved (Bless 1995:23).

1.6 Study plan

Chapter 2: Covers management of financial aid in selected higher education institutions in the United States, the United Kingdom, Australia, India and Africa. Funding formulas, sources of funds and methods of repayment will be dealt with.

Chapter 3: Covers management of financial aid in South African tertiary institutions concentrating on funding formulas and methods of repayment. Compares South African institutions and overseas institutions.

Chapter 4: Covers proactive measures and strategic management of financial problems, techniques and relations between the government and tertiary institutions.

Chapter 5: Covers the conclusions and recommendations with regard to management of financial aid in tertiary institutions in South Africa.

1.7 Demarcation of the study field

Student affairs in tertiary education is a broad topic. It covers a wide range of aspects of student life such as student participation in the governance of the institution, recreation, admission and enrolment, student residences, student health and welfare and student financial aid.

This research will concentrate on the financial aid of tertiary institutions by state, donors, alumni, parents and students. The problem pertaining to financial aid such as budgetary cuts, repayment of student debts, formulas for student financial aid and finally, recommendations concerning the future of financial aid in tertiary institutions in South Africa will be dealt with.
The study will be conducted via literature. A number of countries from Europe, Asia, Africa and North America will be studied. There are, of course, many other tertiary institutions around the world, but all of them cannot be studied in one research. Even in South Africa not all tertiary institutions will receive attention.

1.8 Definition of terms

1.8.1 Effective

According to McLaughlin (1990:41) "effectiveness" refers to the ability to formulate appropriate objectives ("doing the right things"). "Effective" is closely related to efficiency, doing things right (McLaughlin 1990:41). Therefore managers of tertiary institutions should try to achieve effectiveness in managing finance in student affairs. Effectiveness is achieving maximum results using minimum resources (Van der Westhuizen 1991:1). Effectiveness demands continuous review of aims and objectives according to changes in needs (Hartshorne 1996:212).

1.8.2 Management

The term "management" can be fully understood when compared with "administration". The use of the term "management" in education is a relatively new phenomenon and is associated with the shift towards market orientation. Administration is often identified as being service orientated, reactive and routine bound. "Management" is proactive and works towards objectives, through people via techniques in the organization (Stace 1984:71).

1.8.3 Effective management

"Effective management" implies practices that use sound and acceptable techniques towards achieving objectives by applying skills and styles in the right way, that is using minimum resources to obtain maximum results (Van der Westhuizen 1991:1). Effective management of student affairs entails planning, organizing, control and co-ordinating in a proactive way (Benn 1990:204).
1.8.4 Student affairs

"Student affairs" span the whole range of university activities such as enrolment, academic matters such as programmes, admission, student participation in decision-making, recreation, student health and welfare and financial aid. This research will confine itself to financial aid of tertiary institutions. Management of student affairs is a process of organizing and controlling available human and fiscal resources to meet institutional needs and programmes in an efficient, effective, ethical and responsible way (Upcraft 1988:9).

1.8.5 Tertiary education

"Tertiary education" is post school or secondary education provided by technikons, universities and colleges in pursuance of a vocation and is aimed primarily at people who are not included in compulsory school attendance. In this research, tertiary institutions will refer to technikons, universities and colleges. The terms "tertiary education" and "higher education" will be used and shall have the same meaning, that is, post-school or non-compulsory education (Prinsloo 1988:ii).

1.8.6 Financial aid

"Financial aid" is monetary assistance to public higher education institutions which consists of:

- funds allocated by the Minister to higher or tertiary institutions in terms of section 39 of the Higher Education Act of 1997

- any donations or contributions received by the institutions

- money raised by institutions by means of loans

- income derived from investments and services rendered to any other institutions or persons
• the money payable by students for higher education programmes provided by the institution and money received from students or employees of the institutions for accommodation or other services provided by the institutions and receipts from whatever source (Higher Education Act 1997:30).
CHAPTER 2

FINANCING TERTIARY EDUCATION: AN INTERNATIONAL STUDY
2.1 Introduction

In this chapter countries will be studied under the headings, developed countries such as the United States and the United Kingdom, developing countries, like Australia and India. African countries will be discussed under underdeveloped countries, concentrating on Sub-Saharan countries.

This chapter will concentrate on the mechanisms through which different countries allocate resources to higher education. The need to evaluate the efficiency of government financing of tertiary education is becoming more important for several reasons, namely the growth in the social demand for higher education, the broader recognition of the significance of improving the quality of teaching and research, the fundamental structural changes, decline in fiscal spending and the ever-increasing costs due to subsidy cuts to higher education. Indeed, tertiary education creates a budgetary problem because it is more expensive than all other levels of education (Albrecht 1992:1).

Throughout the world, student enrolment in higher education continues to expand at a rapid and alarming rate. This is due to an increase in the number of students finishing secondary education, the increased need from public and private sectors for highly qualified personnel, an expanding range of specializations and, in most cases, attempts to make higher education accessible to many people, especially the poor (Hartman 1991:1). Owing to the lack of additional funds, there is an urgent need for tertiary institutions to identify and attract new sources of funding, to expand the overall level of financial aid to higher education and to reach expanded levels of cost-efficiency in order that little resources can achieve greater effect (Hartman 1991:1).

Tertiary education is in crisis throughout the world, but no more so than in developing and underdeveloped countries. In most developing countries of the world, the majority of students have followed studies in the humanities or careers in law, education, or business, which are all relatively low-cost programmes. But, as tertiary education is regarded increasingly as an instrument of economic development, there are pressures to initiate graduates and research opportunities in technological and scientific fields. This implies a search for more funds to finance the laboratories, workshops and practical training of students and the recruitment of competent faculty members in these areas. On the other hand, there is pressure to maintain or raise the quality of tertiary education for all students (Ziderman 1995:X).
Many countries are faced with huge equity issues. Participation rates by region, social background and race are widely divergent in tertiary education, with the most privileged groups having the best chances in terms of their representation in tertiary education and in the many prestigious institutions and fields of study (Ziderman 1995:X). Before going further and deeper into the crises in tertiary education, a history of funding of tertiary education is necessary to understand these problems and shed light on the way forward.

2.2 Historical perspective

Where does one start a history of financing of higher education? Who started financing higher education and how was it financed? To answer these questions, a historical perspective is necessary (Tuckman 1980:11).

Before the appearance of the modern university, which existed in Europe in the eleventh century, tertiary levels of instruction took the form of students hiring teachers. In India, for example, students would attend the homes of Brahmin scholars who were hired and paid on the basis of their academic and moral standing. In many countries, tertiary education trained elite government officials and religious people. In China, private schools developed to train people to be scholar administrators. In Ancient Greece, students paid itinerant scholars for moral and scientific training which was aimed at preparing them to take part in public or political life. In Islamic countries, students could hire teachers in mosques for religious teaching. To this day, the al-Azhar University has preserved the old tradition of students hiring teachers in the central mosque (Albrecht 1992: 2-3).

In early Egypt, the main beneficiaries of higher education were the kings, who in the process of educating their own sons, provided educational space for the sons of noble families. Later, when the needs of the Egyptian civilization became complex, something resembling government colleges emerged in Memphis (Tuckman 1980:11).

The Renaissance period in Europe saw a flourishing of tertiary education institutions, financed mostly by students and the Catholic Church. The two main types for the collective university arrangement surfaced in Bologna and Paris. The Bologna institution was managed by students who elected the administrative staff for the institution. The student-managed prototype became common around southern Europe. In contrast, teachers administered the University of Paris. A prominent feature of European universities as a whole was the development of areas of specialization. The Italian institutions were famous for medicine and law. The French specialized in religious and philosophical
scholarship. England was known for natural theology programmes. The institutions' dependence on student finance for survival implied that institutions had to develop differentiated fields of excellence (Albrecht 1992:3).

Mass state-aided universities were established in Germany and France at the beginning of the nineteenth century. State intervention had a clear purpose, that was, to provide the necessary technical manpower for the government to foster industrial development. The University of Berlin and the French Ecole Polytechnique in Paris were established to provide technically trained experts to work in government. Furthermore, the Ecole Normale was founded to provide sufficient teachers for universities and secondary schools (Ziderman 1992:4).

The universities essentially trained employees with the government, as the main employer, meeting the cost of higher education. During the twentieth century, these systems increased rapidly throughout the world, as more countries were modernized. Many countries around the world inherited the publicly supported institutions from their European colonial masters. Initially the colonists and a few indigenous people were trained for the civil service. When these countries gained independence the states chose to expand rapidly to replace the manpower gap created by colonial withdrawal (Albrecht et al 1992:4).

From this short history three important points emerge:

Firstly, it reveals the extent to which higher education funding has been dependent on students and not on the government. Higher education was a consumer-driven institution. Secondly, the institutions were more responsive to student demands, because higher education catered for a small élite group (Ziderman 1992:4). Thirdly, training individuals for careers in the civil service is gradually becoming less important to larger tertiary education systems and the developing economies that favour the private sector (Albrecht 1992:4).

In the twentieth century, tertiary education funding has undergone tremendous changes. Higher education in most countries is mainly funded by the government. There are numerous other private sources funding tertiary education such as grants, loans and bursaries or scholarships. Most countries recently started cutting subsidies to tertiary education in favour of other government social responsibilities such as health, creating enormous financial problems.
In this chapter only five countries will be dealt with namely, the United States of America, the United Kingdom, Australia, India and Africa, excluding South Africa. The tertiary education systems and the problems of these above-mentioned countries might shed light on problems facing South Africa.

SECTION A: DEVELOPED COUNTRIES

2.3 Financing tertiary education in the United States

2.3.1 Introduction

The financial crisis has hit every country around the globe. The developed and developing countries are faced with declining financial resources and the United States of America is no exception. As the 1990s unfold, the financial conditions encountered by the United States' colleges and universities are once again, in many instances, under some financial stress. Optimism about the future is rare and the work of management is difficult (Leslie 1995:5).

Since World War II, growth in enrolment has been the major driver of change on campuses. Federal, state and private funding together with student fee increases were in general enough to fund the enrolment expansion. But in the 1990s a decrease in enrolment, cost increases and shrinking financing of tertiary education from traditional sources have influenced most colleges and universities. Terms such as "downsizing", "rightsizing", "continuous improvements" and "re-engineering" have become a part of the discussion and practices of most institutions (Young 1996:28).

Over the past 15 years the number of students receiving loans to pay for tertiary education tuition has risen rapidly. About 50 per cent of all United States students attending tertiary institutions obtain loans during their undergraduate years to pay for tertiary education. Not only has the number of students borrowing money increased, but there has also been a phenomenal rise in the amount of debt that students are accumulating (Saunders 1996:19). It is evident that the increasing debt burden among tertiary institution graduates is due to increased tertiary education costs. Tertiary education costs increased by 50 to 100 per cent at public and private institutions nationally between 1981 and 1994, overtaking inflation by over 50 per cent.
This high level of borrowing to pay tertiary education costs is of grave concern to parents, students and institutions (Saunders 1996:19). On the other hand the dilemma of funding tertiary education is a complex one. There are demands to increase access, maintain quality and reduce public spending. There is a desire to resolve incompatible issues and most people are either reluctant to understand the difficulties, or feel they have no voice in the debate. Despite this, the world is moving forward, and competition for public resources, both from within the education service and outside, is expanding. On the other hand, student poverty is eroding access and the pressure of numbers is silently eroding quality, replacing interactive processes with passive ones (McNair 1993:278).

2.3.2 Subsidy cuts

Many tertiary education debates revolve around one basic question: Who should bear the cost of tertiary education, in what proportion and in what form? From this question emerges discussions about parent savings, parent contribution and student borrowing. Nation-wide, policy-makers are rethinking how they can distribute the burden of tertiary education costs. As this occurs, few factors will affect a student’s ability to take part in and remain in tertiary institutions more than family funds. Thus it is of vital importance that the tertiary education community consider parental attitudes and actions towards funding tertiary education (Miller 1996:45).

On the other hand, the total costs of higher education are influenced by enrolment. In the last two decades almost every government around the world, including the United States, has wanted to increase participation in tertiary education, but governments have another policy aim, that is, cutting public expenditure (Brons 1990:42).

In the 1992 financial year, for the first time in 40 years, overall funding by the 50 United States for tertiary education declined. Then in the 1993 financial year, tertiary education financing in three-fourths of the states rose less than the inflation rate. Moreover, the prospects for going back to the days of strong state contribution for tertiary institutions seem slim. States face decreasing or steady-state revenues, declining federal aid, taxpayer revolts and demands for more funds for fighting crime, for prisons, pension, rising costs of medical aid, growing welfare expenses and more money for K-12 education. Tertiary education is usually the largest piece of the discretionary portion of a state’s budget and is therefore easiest to cut. Furthermore, tertiary education is still considered in many circles as a luxury (Marcus 1995:11).
In the six-year period before 1994, state and local government aid for public education decreased by 17 per cent per student. State spending also declined from 14.5 per cent to 13.5 per cent in a five-year period between 1989 and 1993. Concurrently state government leaders are favouring programmes that would assist their states' economy and social welfare. For tertiary education these include quality and economic developments. Several states have become more outcome-orientated, an interest that has resulted in the inclusion of graduation rates in many state funding formulas, and has triggered another dozen states to think in similar measures (Marcus 1995:11).

The cuts compel institutions to increase costs and many families will not be in a position to pay the fees. The demand has increased for efficient and effective funding mechanisms that are simple, easy to operate and maintain. The cut in state funding elicited various responses from tertiary institutions. Tertiary institutions believe that although their product continues to be robust and quality is improving, what is required is money, not regulations or accountability measures. Some even call for new funding mechanisms, particularly mechanisms that will allow them to spend according to their own objectives and priorities. But what formula should states employ in difficult times of declining aid to fund their public institutions of tertiary learning?

Many American states have used some kind of funding formula to offer their colleges and universities some measure of predictability. As always the formula is based on enrolment, and maybe square footage, and in many ways it includes special factors for the types of study (engineering is preferred over humanities) or levels of study (doctoral students may receive more funds than undergraduates). This enrolment-grounded approach of allocating money encourages institutions to expand their enrolments and increase their graduate programmes, which always results in lowering of admission standards to keep enrolment strong (Marcus 1995:12). Quality and academic standards have suffered in the process.

What is sometimes employed instead of enrolment driven formulas, is a base-budgeting or incremental approach. Which means that this year's contribution serves as the starting point for next year's budget, with increments added for wage increases and inflation, and perhaps for achieving particular objectives. This approach seems to preserve the status quo and always rewards the bigger institutions at the expense of smaller, weaker institutions.
About 24 states were seeking to finance their public colleges and universities according to that of similar public institutions nationally or in their own region. For instance, in the late 1980s the state of Washington's Higher Education Co-ordinating Board debated that the state should finance its institutions in the top quarter among peer tertiary institutions. This method may neglect the ability of a state to supply finance compared to other states, and state tertiary institutions will tend to choose a well-to-do-group of peers.

Working for the Education Commission of the States, John Folger and Denis Jones, not long ago, developed a new approach to state financial policy for the states. It sought to join financing for institutions with financing for state priorities (Marcus 1995:12). Folger and Jones (1995) suggested a three-part budget that included a base demand for continuing the enterprise, a capital budget for new buildings and equipment and a special purpose element of five to ten per cent of the base appropriation in the form of block grants, competitive grants or outcome-based incentive financing. The two (Folger and Jones : 1995) mentioned Ohio, New Jersey and Tennessee as examples where special-purpose funds were appropriated for state objectives. Analysts such as Arthur Hauptman support the idea of competitive grants for fresh funds (Marcus 1995:12).

Indeed the states must invent a funding mechanism that finances a fair share of the strategic objectives of each public college and university yet permit the state to invest in a number of priorities that the state policy-makers consider are important. And the formula should be one that takes into consideration the growing problems that the states face in persisting to devote one out of every seven tax dollars to tertiary education (Marcus 1995:12). What might the fresh state financing approach look like (Marcus 1995:13)?

In New Jersey, the Department of Education recently attempted to develop a new equation for the public institutions budget and state aid. The New Jersey Department of Higher Education gathered information from other states and convened the participants in the budget process for tertiary education: trustees, academics, presidents, financial vice-presidents and lay members of the Department of Higher Education (DHE). The main goal was to develop a mechanism that would provide state colleges and universities with the ability to develop to a large extent, their own plans for the future and also to provide state officials with a measure of oversight and influence over local priorities and overall costs (Marcus 1995:13).
The following resulted from the study:

The government and state legislative leaders would have to agree to the following:

- a percentage of the state budget that they are willing to allocate to public tertiary education over a period of three years
- the legislative budget office would be required to provide the state budget projections for the coming three years
- the government would be required to express their highest action priorities for the starter public colleges and universities.

Each state college or university would have to create its own particular mission or academic strategic plan. This would be based on the type of student aims to educate and on the nature of the educational experience the institution will give to these students, for instance, a state college whose educational programme would be based on a "learning community" model, with regular interaction between the faculty and the students in the classroom, residence halls and dining halls will determine its workload differently from a state university where many faculties conduct research and meet with students basically only in the lecture rooms (Marcus 1995:13).

This subsequent principle permits institutions to develop a distinctive niche for themselves and gives students in the state a broader variety of learning experience and a mission-driven budget that would spell out what it costs to educate a particular number of students in an educational method that the institution has chosen for itself. Each institution would therefore have different cost bases.

The state's tertiary education co-ordinating board would have to approve each tertiary institution's plan, making sure that its plan is within the state's financial planning framework and that it has been responsive to the state's priority. If the tertiary institution complies, the state's tertiary education board would approve the mission or academic plan. Each institution would most likely plan within the actual monetary realities of their state budget (Marcus 1995:13).

Each state's tertiary education board would employ the various campus plans as the foundation for its budget recommendation. These plans could be jeopardized by high and increasing student debt and default in the United States tertiary institutions.
2.3.3 Rising student debt

The high level of borrowing in the United States of America to pay the cost of tertiary education is of grave concern among tertiary institution administrators. Over the past 15 years the number of students borrowing funds to pay college and university tuition has increased dramatically, as mentioned earlier.

Recent federal policy changes, largely powered by deficit concerns and knowing funding priorities, have served to soften the government's partnership with American students wanting tertiary education. As federal and state governments have dropped their support of grant and scholarship aid, and demographics have affected levels of parental assistance, an expanded responsibility has been placed on the youth to finance a large portion of their tertiary education. This has happened without the federal government providing new incentives or effectively urging other partners, such as family businesses, to replace the losses from federal aid (Saunders 1996:19).

Maybe the most serious influence of high student loan borrowing is on the business sector, which to a greater extent than in the past, is relying on employees with a four-year degree to satisfy the growing demand for highly skilled, flexible workers. After students have finished their tertiary education, they are eager to enter the work force and supply businesses with a skilled pool of new recruits. Yet, with student loan debt the main financial concern at this time of their lives, the type of company and position that new graduates accept, is affected by the ability to repay their loans and handle other duties such as home loans and instalments on cars.

Other than affecting the choices made once graduated, the necessity to borrow in greater amounts can cancel a student's decision to enter college altogether. It can also undermine parents' willingness to urge a child to pursue what is simply not achievable for someone in their economic situation. Besides all these factors, an unpleasant trend is threatening the United States of America's ability to persistently produce a stable, skilled work force. Presently, society and businesses are depending on 18- to 25- year-olds to determine the strength or weakness of the rising United States work force, relying on students' willingness to borrow in greater amounts to get tertiary education and the capability to make good on their rising debt after graduation (Saunders 1996:20).
An increase in the level of loan debt during the past decade is mainly the result of sharp increases in tertiary education costs. In surveying the available research a number of causes have contributed to the large expansion in college tuition since the start of the 1980s. Michael O'Keefe, then president of the Consortium for the Advancement of Private Higher Education, argued that tertiary institutions had to play a catch up on salaries and improvement in the 1980s after a number of years of feet dragging in the 1970s. Personnel funding is a large portion of any tertiary institution's budget, and faculty salary increases had not kept up with visibly high inflation rates of the 1970s. Budgets rose in the 1980s as maintenance of facilities, primarily ignored in the 1970s, was undertaken (Saunders 1996:24).

A decrease in enrolment also triggered a new competition among tertiary institutions for a declining pool of students, and pressurized administrations to spend funds on "high appeal" equipment. This included buying computer equipment, building teaching and research laboratories as the desire for technology rose on the campuses, adding to old fashioned library collections and adopting a card catalogue system into an electronic database. Some colleges and universities anticipated a drop in enrolment and started channelling income to endowment or reserve money (Saunders 1996:24). O'Keefe (1996) contended that the greater availability of federal loans had also influenced tertiary institutions to increase costs, stating that the magic of "buy now, pay later" has come to tertiary education, making it almost painless to increase costs (Saunders 1996:24-25).

Besides, stated O'Keefe, families were more eager to pay for tertiary education in the 1980s. Concern about tertiary education has increased steadily since that period. A survey completed in 1986 found that 75 per cent of the respondents felt that the expense of tertiary education was heading beyond the reach of the average American family. After six years, in 1992, another survey found that 92 per cent of Americans in the eastern part of the country felt that the costs were increasing so rapidly that many people would not be able to afford tertiary education. A number of studies in the United States of America proved that a rise in tertiary education expenses had a negative effect on the enrolment of students from poorer backgrounds. Michael McPherson and Owen Morton Schapiro in (Saunders 1996:25) also contended that the enrolment of students from middle-income backgrounds at public and high-class private institutions, were also influenced by big rises in tuition fees. Average enrolment rates of African-American students in all kinds of institutions fell noticeably from 35 per cent in the period 1975-1979, to 25 per cent in the 1981-1985 period, while the average enrolment amongst whites decreased from 33 per cent in 1975-1979 to 29 percent in the 1981-1985 period (Saunders 1996:25).
2.3.4 Student loan scheme

In the USA the funding scheme is fundamentally a mortgage loan through commercial banks. As well as seeing to their accommodation costs, students must also pay for their tuition. There is a different source of funding available in the form of loans and grants and parents are required to contribute but there is no legal expectation for them to do so. The federal government also processes student loans through commercial banks, with the government guaranteeing the financiers a certain percentage income above the Treasury rate. The state also pays the interest to the banks for students in tertiary institutions. All these student loans are paid off over a ten-year period with interest. This system is regarded as complicated and costly to finance. The total cost is about $3 billion a year and is funded by the tax-payer. This private system increases the cost for students at tertiary institutions. What is needed is a cheaper system funded by the federal government (Wilson 1996:119).

The last decade has brought forward a new stage in American tertiary education. Pressures and demands for accountability are now very strong. As the available pool of 18-22 year-olds continues to decline, the cost of education continues to increase and the competition within education for resources rises, the demand for accountability within student affairs is certainly intensifying (Williamson 1990:200).

For most colleges and universities, student receivable balances, particularly for undergraduate accounts, are rising or becoming old and proving increasingly difficult to collect. While tertiary institutions' circumstances differ, some familiar factors contribute to growing student receivable balances. The main cause is annual increases in tuition, which may exceed a family's ability to pay. For instance, in the 10-year period, ending 30 June 1993, gross tuition prices more than doubled, increasing at an average annual rate of about 8.5 per cent. Another cause contributing to the higher receivable balances is the complexity of the formula of financial aid process. The different requirements, procedures and deadlines of various loan programmes may create confusion. Some colleges and universities try to minimize the effect of this complexity by demanding payment of tuition fees before registering for classes. Others demand proof of ability to pay before registration, accepting an account balance until the loans come through, or other financial awards received during the semester pay the remaining balance (Jacquin 1995:33).
Some tertiary institutions allow students to register even though their receivable balances continue to rise. This approach stresses working with the students to resolve the payment problems. Collection of amounts outstanding is considered more likely if students continue with their studies, graduate and secure employment. Many tertiary institutions particularly those stressing enrolment, are tempted to accommodate these students thereby accepting the risk of delinquent receivable balances (Jacquin 1995:33).

2.3.5 Pell Grant Programme

During the past 15 years several studies have cited the importance of the Pell Grant Programme in addressing two important issues, namely increasing tertiary education access for low-income and minority students and improving persistence rates by lowering the number of students who drop out and are a financial risk. A 1991 study remarked that due to the Pell Grant Programme, lower-income student enrolments were 21 per cent higher than they would have been without the existence of this kind of financial aid (Saunders 1996:25).

Pell Grants positively influence students' persistence at tertiary institutions. A Government Accounting Office study concluded that supplying an additional $1,000 in grant assistance to African-American and Hispanic students minimized the likelihood of their dropping out by about 7 and 8 per cent respectively.

Although the number of low-income and disadvantaged students increased at colleges and universities because of the Pell Grant Programme, the Programme has not been able to survive as the main financial assistance vehicle for these groups. From the late 1970s, the proportion of financial assistance supplied through the Pell Grant Programme has slowly decreased. In the period 1975-76 grants and other types of assistance still made up 76 per cent of the financial aid packages, with loans making up 21 per cent. Within 12 years, this allocation was totally reversed. In 1987-88 grants and other assistance decreased to 29 per cent of student aid gifts, with loans making up 67 per cent. Recent numbers from the American Council on Education put the loan to grant ratio for 1994-95 at 3.8:11 against 2.5:1 ten years earlier, in 1984-85 (Saunders 1996:26). Studies were conducted to monitor debt levels from the 1970s to about 1993 and while not very clear, they do supply some information on the trends. Unfortunately, debt levels have increased dramatically since 1992 when changes in eligibility and loan limits triggered greater levels of borrowing (Saunders 1996:26).
As noted earlier, the increase in tertiary education costs, decreasing grant aid and rising use of loans were the main causes for the rising student loan debt, but there has also been a move in the responsibility for paying for tertiary institutions. Over the past decade, half of the students have started contributing a larger portion of tertiary education fees as both governmental and parental assistance has become less.

The 1991 Boyal and Wennersdahl study of student loan repayments found a decline of 6.3 per cent in the number of students who got major financial assistance from parents/relatives as compared to the previous survey done in 1985. Researchers and policy analysts have discovered a pattern over the past ten years that shows that students are taking more responsibility in financing their own tertiary education. In 1986, Bruce R. Jonstone, a tertiary education analyst and author identified the following key factors for the reason in the decline in taxpayer and parental assistance for paying for tertiary education (Saunders 1996:28).

Firstly, a rise in the number of older independent students to whom parents are no longer financially responsible. Secondly, there are a greater number of divorced or separated parents, resulting in single-parent or single-income families, which means that the students have to carry a greater portion of the tuition fees. Lastly, a decline in the willingness of parents to “sacrifice” for their children’s education, possibly because of decreasing savings and having to pay higher taxes (Saunders 1996:28).

For those students in tertiary institutions, who are carrying a greater portion of tuition fees, the need to endure larger debt could affect the choices they make concerning their educational career paths (Saunders 1996:38). In the 1990s, the increase in tertiary institutions’ expenses, the declining capability of families to pay for tertiary education, an older student population and higher institutional enrolment has put both tertiary administrators and students under pressure to find a solution that will be sustainable and effective (Hart 1996:37).

For years tertiary education analysts, donors, economists, tertiary education administrators, loan suppliers and even students have presented several potential solutions for keeping tertiary education loan debt at a reasonable level.
The following are some of the "solutions":

- increase the level of federal and state grant aid so that loans do not compose such a high percentage of the financial assistance package

- increase and improve student debt counselling before, during and after tertiary education. Students clearly understand that debt levels should be pegged to anticipated salaries after graduation as a way to keep debt to income ratios from becoming burdensome

- urge families to save for tertiary education so as to lessen the number of loans required to cover the costs of tertiary education

- increase loan "forgiveness" programmes that provide student loan borrowers with alternatives for retiring their debt while working to solve social or community matters

- identify the direct and indirect groups who benefit from having a higher number of educated people, that is, the federal government and business, and educate these parties about the value of sharing the responsibility of educating the work force (Saunders 1996:33).

For many years the tertiary education society has sought a rise in grant aid, but this has not happened. The Congress' single-minded focus on deficit reductions does not bode well for tertiary institutions in the foreseeable future. American families continue to question and complain about the cost of tertiary education. Access to lower- and middle-income families continues to decrease, mainly because of expense concerns and the necessity of having to borrow to pay for tertiary education. Who should carry the cost of tertiary education and in what proportion and what form? From this question comes a discussion about parent savings, parent contribution and student borrowing (Miller 1996:45).

According to the National Centre for Education Statistics (NCES) which conducted a study involving a cohort of approximately 25 000 eighth graders from over 1 000 public and private schools across the United States, it was found that most parents reported that they had done something to prepare for the expense of tertiary education. Most parents have planned to reduce costs by 44,4 per cent, encouraged teenager savings by 39,2 per cent or established a savings account of about 38,1 per cent. About 33,4 per cent of parents reported that they had not yet started to prepare for the expense of tertiary education. In addition about 26 per cent of parents reported that they had started
saving only in the last three years (Miller 1996:46). By 1992, many parents who had set up some sort of plan said that they had saved some money for tertiary education. About one-third reportedly saved between one and five thousand dollars. Thirty eight per cent of parents who had started to save said they had saved more than five thousand dollars.

Not surprisingly, many parents (about 85 per cent) reported that they did not anticipate that their savings would cover all the expenses of tertiary education. This means that parents and students will have to depend on different resources to finance their tertiary education.

About 68 per cent of parents had either discussed with someone or read about financial aid for tertiary education. Surprisingly, parents were more likely to report that they had sought some advice from printed material or “knowledgeable persons”. Those least likely to have been approached were tertiary student aid administrators and bank loan officers. The financial help mechanisms used by about 60 per cent of parents include inter alia “grants”, “scholarships” or “fellowships”, followed by “school-based work programmes” at 47 per cent and loans at 45 per cent. However, the number of parents who had really applied for loan and work programmes was about half the number of parents who thought they would use those programmes. The reasons for not applying for financial help were cited as “the family can pay” about 39 per cent, followed by “goals are not high enough” at 28 per cent and “we did not know” by about 20 per cent (Miller 1996:46).

Amazingly, a greater proportion of parents anticipated either no or low expenditures for their student’s “next years” - “the dependent first year” in tertiary institutions. About 30 per cent of respondents reported that they would spend nothing on tertiary education. Another 25 per cent reported that their only expenditure would be less than $ 2 500. For those parents who did expect expenditure, very few showed much willingness to go into debt to fund those expenditures. About 32.7 per cent reported that they would not go into debt, while 24.3 per cent reported that they would borrow only $ 5 500 or less (Miller 1996:47). This shows that parents need to be educated in how to fund tertiary education. They need to know about loans, grants and subsidies. Loan counselling is necessary.

2.3.6 Loan counselling

Loan counselling ventures on campuses have improved over the past five years, but the value of controlling debt levels is always overshadowed by other student priorities like persistence in college and completing a degree. Most early college awareness programmes are aimed at the value of
saving for tertiary education, but Americans, famous for their low saving rates and increasing consumer debt, often feel pressed with day-to-day costs, making it less likely that any money is being saved for tertiary education. Loan forgiveness programmes have helped some students, but most of the programmes initiated by the federal government have not been financed (Saunders 1996:34).

Student loan debt can be a heavy burden for some college and university graduates. The result of a survey of Iowa College borrowers suggests that about 74 per cent have manageable debt, while 26 per cent are overburdened. About 7 per cent can be expected to pay their debt. Those with a larger debt burden may still be able to pay because of the different methods of payment available, but an "excessive" debt loan can occur if the student either has an excessive debt or becomes unemployed after graduating.

Administrators should determine how much debt is really too much and how this level of debt influences students. Surveys of student loan debt are not new. Andre Daniere (1969) studied the subject employing extrapolation from the total income for a male cohort and came to the conclusion that an affordable level of student loan debt was 7,5 per cent of the after-tax income. He believed that mean consumption was 90 per cent of income. Daniere also discovered that the remaining 10 per cent could be shared between life insurance, emergency funds of 2,5 per cent and an affordable level of student loan repayment of 7,5 per cent (Greiner 1996:7).

Hansen and Rhodes (1988) assessed five definitions of affordable debt and suggested a level founded on a study of discretionary spending. The survey was aimed at the definition of too much debt on discretionary spending, including single cash contributions, retirement and insurance payments. By analysing the Bureau of Labour statistics' discretionary spending information, the writers arrived at three levels: 10 per cent, 12,2 per cent and 15 per cent of income for beginning salaries of $15 000, $20 000 and $25 000 respectively. Hansen and Rhodes (in Greiner 1996:7) concluded that at the 15 per cent level, fewer than 2 per cent of the graduates had excessive debt.

Robert W. Hartman's Credit for Colleges argued that college graduates earned 27 per cent more than high school graduates. This is founded on the 1959 survey of "Northern and Western White, Non-farm Males". The survey further believed that two-thirds of that amount was directly due to tertiary education and that this 18 per cent variation amounted to 15 per cent of the individual's total earning. Hartman also argued that many of the income variations could be employed to pay tertiary education debt and concluded that the maximum loan debt for each household should be 15 per cent (Greiner 1996:7).
2.3.7 Towards a market principle

The market principle of tertiary education during the 1990s has as its main theme the "market model" of funding. Most of the higher education systems of highly industrialized western nations are moving towards a "market model" of funding. State support of tertiary education in many of these countries is declining and what remains of it is being moved, from block grants to categorical grants, that is, support for specific state purposes. This decline implies that tertiary institutions are expected to raise more and more of their own funds through such measures as higher tuition fees for students, research grants, contracts with business and industry, and special training programmes for élite groups. The tertiary education financing system in the United States is run by the Organization for Economic Co-operation and Development (OECD), an example for changes to be instituted in tertiary education. That model is first selective, and is characterized by incentive financing, as viewed in relative terms by the OECD members. The American model is viewed as employing "market" principles. No other country has all the funding methods that are in use in the United States. Almost all are characterized by one or more of the American alternatives to government block grant funding (Leslie 1995:6).

From an internal perspective within the United States, there is no question that funding sources are many and varied, even within the separate public and private sectors. General and categorical institutional aid from the state provides the financial base for the public sectors, but since education has become more and more significant, federal aid to students has become more important in order to meet those higher payments. Voluntary aid is expanding and different forms of self-generated funds may be vital to institutional validity, for instance competitive research funding by research universities. The private sector relies more heavily on tuition fees, but the mix is often as different as within the public sector while private research universities are collectively even more dependent upon federal research financing than public universities (Leslie 1995:6).

Perhaps the fundamental difference between the United States and other Organization for Economic Co-operation and Development (OECD) countries in this regard, is that the changes in the former have been more gradual and incremental and thus less noticeable, whereas changes in the latter have been more dramatic and thus evident (Leslie 1996:7).
The right balance of responsibility for funding tertiary education among states, the federal government and families has been the focus of hot debate for nearly three decades among educationists, analysts, politicians and the public. A single specific financing policy proposal has appeared at least once each decade, moving the balance from tuition support to direct aid for the poorer students. Supporters of this notion suggest that states should allow tuition levels to rise to cover a greater part of educational costs while raising support levels to protect needy students (Griswold 1996:361).

But there are some tertiary institutions who successfully did the opposite. They kept fees down while maintaining quality. The following is a detailed discussion of the successes of Muskingum College and Harvard University to support the point that tertiary institutions can generate their own income.

2.3.7.1 Muskingum College

While many tertiary institutions increased fees, one college in the United States slashed tuition fees by nearly a third. This is Muskingum College in Ohio. How did they do it and why did they succeed? Muskingum College went public about plans to lower tuition fees by $4 000, that is a 29 per cent reduction for students entering in the autumn of 1996. Many parents and the public in general applauded this move (Speck 1996:6). Finally, here was an institution of higher learning that was attempting to stop the spiral of tuition increases. Yet, their break from the pack was anything but a "miracle". Muskingum started discussing pricing alternatives in the late 1980s as part of a long-term plan involving administrators, faculty, board members, students, alumni and community representatives. They set up four enrolment objectives:

- grow gradually from 1 100 to 1 200 students
- increase entrance test scores for new students
- encourage student diversity
- slow down the expansion in the percentage of the institutional budget earmarked for financial support (Speck 1996:6).

In the United States there is no uncontrolled increase of student enrolment, in fact, many tertiary institutions struggle to get enough students enrolling while in developing countries there is the problem of an explosion in enrolment. In 1990 Muskingum College focussed on this disconcerting problem as part of their strategic plan, with the assistance of a consultant. They started to review courses, enrolment procedures, marketing and financial aid. The College also established an
administrative faculty committee to review a series of financial-aid strategies and then to make recommendations to the board of trustees. Financial assistance was challenging because the College had never served a wealthy clientele: most of its clientele had substantial financial need, (Speck 1990:7).

During the summer, Muskingum refined their research, including the designing of funding and called on The Gallup Organization to survey public attitudes towards tertiary education costs. After the survey Muskingum realized that the public was dissatisfied with high tuition fees. Parents clearly were ready for a general cut in fees, so long as it was done in a way that assured them that the quality of education was not compromised (Speck 1996:8).

There were a number of factors that supported the decision to cut fees. Firstly, Muskingum College would complete a $35 million campaign, the largest in its history and one they expected to succeed. The College initiated the installation of a $2 million computer and telecommunication system on campus and made a number of major improvements, including a $4.1 million residence and dining hall renovation. After three years student enrolment was at the highest level they had ever been in two decades. Eventually, the executive committee and the board unanimously accepted the marketing and funding suggestion and authorized its public launch (Speck 1996:10).

In retrospect, three factors contributed to the success of Muskingum College's price cut. The institution studied the matter of pricing for a few years, the College was blessed with a united board who came together on decisions and a wide range of stakeholders were involved throughout the decision-making process, creating an informed community (Speck 1996:10).

2.3.7.2 Harvard University

The fast development in the field of personal computers, computer networks and the accompanying software has made it possible to use technology to assist major fund-raising and other development ventures. Not long ago Harvard University had a $2 billion fund-raising campaign. The campaign was special for Harvard, not only due to the size of its target, but also because it was Harvard's first "University-wide" campaign (Conway 1995:46). The project manager was required to be both technically competent, knowledgeable about fund-raising and capable of finding solutions to any problems which could arise (Conway 1995:49).
Harvard successfully developed the client/server system known as Solicitation and Alumni Records (SOLAR). Though SOLAR has been in use for only a short period, it has been readily accepted and widely used. Total profits have been proved by the widespread requests for its employment from other units of the university.

The achievements attained with SOLAR are numerous, but the main ones are as follows:

- fund-raising personnel have a rapid and easy mechanism for accessing and reporting the information. The client/server architecture can answer complaints more completely than a terminal-orientated system

- fund-raisers have access to current data, since queries are made available in proper time rather than against the information residing in a file that has been recently downloaded

- the ease of operating the system has resulted in an acute decline in the amount of training needed by new personnel

- the amount of time needed for computer staff to improve programmes for different jobs and reports has been significantly decreased.

SOLAR is expected to play a major role in a success unequalled in the history of fund-raising in tertiary education. Working with 600 000 prospects, Harvard aims to raise $2 billion during the five-year period of its university-wide campaign. This crucial sum of money will assist in providing a first-class education for Harvard's student organization into the next millennium (Conway 1995:52).

### 2.3.8 Endowments and alumni contributions

With enrolments down and operating costs up, with federal research finances disappearing and with admission and hiring policies being questioned, the only way of getting out of the tertiary education financial dilemma is by means of endowment. Endowment funds have proved to be successful in many colleges and universities over the past decade in the United States of America.

"It is a bright spot in an otherwise dismal picture," says Dr Richard Ingram (President of Association of Governing Boards of Colleges and Universities). The good news includes promising notes on the endowment funds appearing among historically black colleges and universities (HBCU). Two
HBCUs have endowment assets valued at more than $100 million (Taylor 1996:10).

The prospect of state and federal government budget cuts for tertiary education may put black tertiary institutions in an ever tightening financial grip. Black tertiary institutions traditionally depended heavily on federal government aid to balance their budgets. Federal government grants and other aid now supply about 28 per cent of the operating finance for private black colleges and universities against 18 per cent for predominantly white institutions. Consequently any general government budget cuts for tertiary education will have a more severe effect on black tertiary institutions, resulting in the closure of many black institutions setting much higher than normal tuition fees.

Figure 1: Tuition fees as percentage of total revenue

(Source: Cross 1996:64)

Many black colleges have been forced to supplement tuition fees at a pace higher than the average white institutions. Historically black institutions also expanded aggregate tuition revenues, and enrolment figures for black institutions have increased from 239 000 in 1988 to 282 000 in 1993.
Faced with serious budget cuts, black tertiary institutions have less by way of endowment resources to fall back on. Endowment earnings provide only 2 per cent of all operating expenditure for private black tertiary institutions compared with a much higher income at the highly endowment elite tertiary institutions (Cross 1996:64). Added to that, there is a slight likelihood that black tertiary institutions' endowments will increase noticeably. Only 14 per cent of the black alumni contribute to their Alma Maters every year compared to 22 per cent of alumni of all tertiary institutions. In addition, the average contribution by alumni from black institutions is only about half that of the national mean.

Powered by fifteen years of strong equity market, endowments at most black tertiary institutions have increased. But much of the increase has been at the more prestigious institutions such as Spelman, Morehouse and Tuskegee. The total value of endowments for all 41 private black colleges assisted by the United Negro College Fund is $529 million. These endowments assist the education of 54,000 students currently enrolled at these tertiary institutions. In comparison, the endowments of Swarthmore College, a liberal arts college of 1,500 students outside Philadelphia, total $536 million.

In the United States, the congressional balanced budget crusade shows the traditional dilemma of the survival of the fittest. The state-aided finance safety net that used to shield black tertiary institutions will certainly be eroded and may vanish, if there are further federal budget cuts for black colleges.
But for the fact that racial conservatives in Congress favour the idea of black tertiary institutions as a buffer to slow the march of racial integration, one might detect a hidden ideological agenda that could drive black tertiary institutions to financial ruin (Cross 1996:64).

One of the main causes of this financial squeeze at black colleges and universities is the absence of strong alumni-based aid. During the 1993-94 period only 14 per cent or 35 000 of the nearly quarter million living alumni of all 41 black tertiary institutions supported by the United Negro College Fund made contributions to their Alma Maters. These alumni donated about $9 million with an average of $274 per person.
In sharp contrast is the alumni that give at mainly white institutions. For instance, Harvard University has about the same number of living alumni as all the private black colleges, yet more than 68,000 of the approximately quarter million living alumni of Harvard contributed to Harvard over the 1993-94 period. These alumni contributed $111 million to Harvard, an average of $1,633 per person.

One may think that it is not fair to cite Harvard as an example, but there are hundreds of mainly white tertiary institutions that get more in alumni gifts than all private black tertiary institutions together. For instance, the case of Western Reserve in Cleveland, Ohio got more than $25 million in alumni contributions, nearly threefold the amount given to all 41 black tertiary institutions (Cross 1996:65). Another source of fund-raising for students in tertiary education that needs attention is the student loan scheme.

2.3.9 Fund-raising

Fund-raising in tertiary education is at a crossroads. At stake is not only the character and objective of fund-raising but also the institutions' professional development. One solution is to separate fund-raising from the general function of the institution. The development function would become a quasi-
independent foundation serving those components of the institution that have access to well-identified donor communities and the capability to carry the full cost of the fund-raising.

The political and financial freedom of such a fund-raising foundation would need the aid of donors so that the projects can be fully financed; it also would mean that this fund-raising would be mostly free of institutionally identified objectives and priorities. According to this model, the expense of fund-raising itself would be carried by client programmes, that is by a department or a school (Naho 1995:24).

The final test for success in tying institutional academic planning with a fund-raising programme is the extent to which an institution's governing body includes the aims and goals of the plan and enthusiastically becomes involved in the fund-raising endeavour. Needs-driven investments in an institution, rather than donor-driven projects will come to fruition if board members become willing representatives of the process of institutional planning and strategic fund-raising.

Two worrying maxims that presently are making rounds in tertiary education department offices are first: "Try as one will, fund-raising results in donor-driven rather than need-powered". This implies that the funds that are raised are funds that could be raised because friends, corporations, alumni and foundations were prepared to further their own objectives. The more successful the fund-raising, the more likely that the donors' priorities, rather than academic objectives or needs, will decide the future of the institution. This should not be allowed to happen.

The second maxim causing a headache in some quarters is: "Successful fund-raising programmes cost more money than they raise because major donors expect more from institutions". They (donors) supply half of the much-needed dollars for construction and no operating expenses in return. The tertiary institution builds halls and laboratories and names them after donors but there are no funds for maintenance of these buildings, resulting in tertiary institutions funding these projects from their limited resources. The donors should provide the maintenance costs in order to alleviate the problem (Naho 1995:22).

In the last decade, campaigns and fund-raising drives have become more common, more elaborate and more complex. They take place over longer periods and are bigger in size as American Colleges and Universities struggle to make ends meet. One consequence of this increase has been that academic chief executives are increasingly expected to take an active role in fund-raising and resource development. However, this crucial role has attracted limited scholarly or critical interest
and, for the most part, remains misunderstood.

According to a recent study (Cook 1996) fund-raising is a team effort. The president of the institution should typically be a pivotal player of the fund-raising team and should focus their fund-raising attempts on gifts and administrative leadership (Cook 1996:1).

As American institutions of tertiary education limp into the next century, foreign language department heads encounter new problems that further complicate an already complex situation. Chairs have worked as cheerleaders, referees, psychologists, disciplinarians, soothsayers, mentors, advocates, accountants and resource managers. Now, three aspects force them to take on the role of fund-raisers. Firstly, as internal finance continues to decline, heads of departments can no longer wait for their administrators to finance curriculum development, faculty and graduate upliftment, laboratory and library resources and teaching aids. Some heads already encounter little financing for routine work such as photocopying, long-distance telephone calls and office supplies. Secondly, as foreign language programmes include applied and professional elements to the traditional literature curriculum, most heads of departments will be required to take greater part in curriculum revision and upliftment in order to raise the needed funds. Thirdly, many foreign language departments, particularly those in metropolitan tertiary institutions, are now required to function outside the closet in close interaction with business, government, industry and society thus requires clear knowledge of fund-raising (Laughrin-Sacco 1996:39).

As far as foreign language departments are concerned, chairs can secure financing for the teaching from governments whose languages taught in these institutions, for instance, the government of Quebec annually donates library material worth $1 000 to Boise State. Quebec has also provided heads with a faculty upliftment grant of $5 000 for the development of a Business French Course in Quebec and $20 000 for the improvement of a Business French Textbook on Quebec. The French Cultural Services, the Paris Chamber of Commerce and Industry, and Goethe Institute also willingly assist foreign language faculties (Loughrin-Sacco 1996:42). The learning or teaching of language can attract additional funds for tertiary institutions.

2.3.10 Conclusion

The financial problems facing tertiary education systems around the world cannot be ignored any longer. Even the most developed countries like the United States are still wrestling with formulas to fund tertiary education. In the United States of America as in South Africa, there are still racial
inequalities. Most of the prestigious universities are still white, while black colleges and universities are finding it hard to cope financially. Maybe this can be attributed to the political power structure in the United States, where whites constitute 80 per cent of the population. In South Africa it is the opposite. The United States is still trying to find a solution to accommodate poor students in the tertiary education system without lowering standards. In the United States, as elsewhere around the world, subsidies are being cut and tertiary institutions are forced to increase fees, meaning that poverty will prevent many students from registering. This also happens in South Africa, causing tension and riots in tertiary education, leaving thousands of students outside the lecture rooms. Programmes to help the poor in the United States like the Pell Grant programme have failed to provide relief for the poor because of the cut and the growing demands for financial aid.

In the face of the declining subsidies, student debt is increasing at an alarming rate. South African tertiary institutions face the same problem. In South Africa student debt amounts to R500 million. It is evident that the repayment mechanism in both countries needs re-evaluation and improvement. In the United States of America there is no shortage of funds as in many developing countries, but it is the demand for more autonomy for tertiary education that forces the government to cut subsidies. The funds from this subsidy cut are diverted to other social services such as health. In many circles in the United States of America tertiary education is still regarded as a luxury rather than a necessity, which implies that tertiary education is low on the list of government priorities.

One important aspect of the United States of America tertiary education system is the drive towards market principles, whereby tertiary institutions are encouraged to seek additional funds from private sources. Tertiary institutions should be run using business principles or management style such as Total Quality Management (TQM). Many "white" universities in the United States of America have made considerable progress on this new approach. Many more are heading in the same direction. Muskingum College and Harvard University are good examples. The two institutions have proved beyond doubt that there is a light at the end of the tunnel for tertiary institutions in the United States of America and around the globe. In the United States, parents like their South African counterparts do not invest for tertiary education, according to the research, and the reasons for this vary. The importance of loan counselling for parents is necessary in tertiary education.
The South African tertiary education system could learn the following from the United States of America system:

- a wide variety of funding methods for the poor
- a drive toward the "market" model in tertiary education for additional funds from investment, donors and fund-raising which is so successful in the United States of America.

It is evident that better tertiary education depends largely on the economy of the countries. The United States as one of the developed countries is succeeding in the development of an effective and efficient tertiary education system. Presently many students around the world flock to the United States of America for tertiary education, but the problem of the poor and equity still exists in the United States.

The United States of America also boasts the diversification of tertiary education, that is, it has public tertiary institutions and private institutions which offer expensive but quality tertiary education and in the process set the standards for public institutions. South Africa can also privatize some of the tertiary institutions in order to maintain good academic standards.

In many developing countries, including South Africa, there is an over emphasis on access to tertiary education which has a detrimental effect on the quality of tertiary education because in the process of attempting to accommodate everybody, requirements for admission are lowered. Many parents and academics in the United States of America looked at Muskingum College with suspicion and great interest because they did to believe in lowering fees. They associated lower fees with lower standards, but that was not the case. Muskingum College's high standard was maintained.

Having discussed the tertiary education system in the United States of America and identified a number of problems faced by the system, one wonders whether money can solve the problem of tertiary education. In the end one can conclude that money can not solve all the problems of tertiary education. This leaves one with more questions. Maybe the United Kingdom's system of tertiary education can offer some answers, because like the United States of America, it is a developed country.
2.4 Funding tertiary education in the United Kingdom

2.4.1 Introduction

Since the last decade British University funding has been experiencing fundamental changes (Williams 1992 Kogan 1992 Mace 1996:7). Tertiary institutions have been subjected to a series of government laws aimed at increasing access while reducing expenses and expanding effectiveness, efficiency and accountability. The state has envisaged transforming the British tertiary education system from an elite to a mass system which is closely linked to the world of employment and more answerable to the needs of the people. This trend is common in tertiary education around the globe. Thus the lessons learned by the British in tertiary education are important to South Africa and other nations who are wrestling with the need to expand access while coping with decreasing financial resources and attempting at the same time to uplift quality (Green 1995:225).

The changes introduced into the British tertiary education system included the abolition of the quinquennial funding system (five-year funding system) in the late 1970s, the introduction of the “full cost” fees for foreign students during the 1980s, the creation of formula funding during the 1980s and most recently, increased separation of the funding of research and of teaching (Mace 1996:7).

The participation rate in British tertiary education is very low compared to that of the United States and Europe. Thus the British government, like its South African counterpart, wanted to increase access. During the 1970s only ten per cent of secondary school students enrolled at tertiary institutions. During the late 1980s, 15 per cent had enrolled at tertiary level. In the early 1980s the government started to reduce funding, resulting in the low enrolment of students, but since the mid 1980s, financing formulas and policies have benefited expansion. During the 1992-93 period, tertiary institutions in the United Kingdom enrolled about 28 per cent of secondary school students. The target was 33 per cent by the end of the millennium. The 50 per cent enrolment increase in six years brought new problems in terms of physical capacity such as classroom space, living accommodation and library books. The old universities are experiencing an imbalance between teaching staff and student numbers. Students are also faced with the problem of coping with the high academic standard required by tertiary institutions (Green 1995:227).

The British further abolished the binary system in 1992. Until 1992 the polytechnics and the universities were funded separately. The University Grants Committee (UGC) was the main funding mechanism. It served as a buffer mechanism between the government and the universities and,
indeed, delegated substantial autonomy to universities, maintaining financing decisions and control of academics. The University Grants Committee (UGC) was replaced by the University Funding Council threatening the autonomy of the universities. The University Funding Council worked closely with the government (Green 1995:227) in order to install a market mentality into the financing process, whereby the state "buys" services from tertiary institutions. Government financing for academic courses is provided through a scheme. Firstly, the institutions are given a budget for instruction, based on the competitively decided formula to determine the cost of teaching per student in a particular discipline. This is designed to reward "efficiency rather than quality". In the end this can be called a "pseudo-market" approach because the state controls the money and policies (Green 1995:227).

While the transformation in British tertiary education can be traced to the early 1980s, the last decade has seen dramatic changes. The first change in British tertiary education was increased access. In the past English tertiary education had a very low participation figure in comparison to that in the United States of America or continental Europe. During the 1970s, about 10% of secondary school graduates entered university; by 1987, this had increased to 15%. The early 1980s ushered in a cut in government funding and as a result, a cut in student enrolment in what are now known as the "old" universities (that is, the 48 universities before they became polytechnics in 1992). Ever since the 1980s, policies and financing formulas have favoured expansion. Tertiary institutions increased their sizes.

Secondly, change in the British tertiary education system came with the end of the binary system. Until 1992, the polytechnics and the universities had separate financing mechanisms and quality evaluation procedures. From 1945 until 1981, the University Grants Committee (UGC) was the main mechanism for university financing. It functioned as a buffer organization between the government and the universities, in this way providing universities with more autonomy and keeping financing decisions in the hands of academics. The University Funding Council which was established in place of the University Grants Committee, involved the government in financing decisions (Green 1995:227).

The polytechnics, whose missions and organization varied from those of the old universities, because they were largely financed by the local Education Authorities under the National Advisory Board (NAB) for local authority higher education, became free corporations, no longer under the authority of local government. In 1992 they became universities and were amalgamated with the old universities into a single system for financing purposes (Green 1995:228).
The different funding organizations for the two sectors, the University Funding Council (UFC) and the Polytechnics and Colleges Funding Council (PCFC) were amalgamated in 1993 to form a single Higher Education Funding Council of England (HEFCE). (There are different funding councils for England, Scotland and Wales, each with different policies and procedures.)

The funding system of the Higher Education Funding Council of England (HEFCE) provides the government with a straightforward mechanism to control the total system as well as single institutions. Over the last five years, financing policies have given universities strong rewards to expand their enrolment, but the increase has led to a decline in financial resources because of over-enrolment and a cut in subsidies.

While financing policies are clearly controlling the system, in some respects British tertiary institutions have maintained control denied to most publicly financed United States of American tertiary institutions. British tertiary institutions may budget most of the government funds as they like and may carry forward reserves of unspent funds. The amount of autonomy to budget funds within the government allocation differs from one state to another, but many public institutions agree that the present system of government funding inhibits rather than encourages flexibility (Green 1995:229). But how are students financed? The British tertiary education system, like many others around the globe, employs loans and private sources to finance students. A discussion on loan schemes and private sources of funding follows.

2.4.2 Loan schemes and private sources of funding

Besides grants and bursaries and scholarships, student financing can take the form of loan schemes from private sources or governments. The former has to be paid over a prescribed period ranging from 5 – 10 years while the latter can be in the form of donations from industry or a company donating money for the establishment of library or other services. Private sources can ease the burden on government and parents.

2.4.2.1 Private sources of funding

The relationship between the tertiary institutions of Europe and the organizations which provide their government funding is changing quickly. The role of the government has changed from being on the supply side of tertiary education to aligning itself with the market. Pressures on the public costs and tertiary institutions' desire to have greater freedom and to be able to take advantage of new
opportunities, have united to challenge the traditional trends and patterns of government funding (West 1996:125).

Some tertiary institutions around the world have decided that the best way of maintaining their autonomy and preserving the quality of their service is to raise more money from non-government sources. Income from private sources grew in European countries like France, Germany and the Netherlands over the last decade. The position of the United Kingdom has been more dramatic since 1989-90 since foreign students are charged full-cost fees, that is, without subsidies (West 1996:128).

The major source of their earnings are full-cost fees charged to foreign students; research contracts with industry, commerce and government; overheads on those contracts; conferences; sponsorship from the private sector and donations from alumni. Property is another vital source of capital. Warwick University earns substantial profits each year from its bookshop. The British government always tells tertiary institutions to learn from the private sector, but in terms of entrepreneurial meaning and market consensus, many other British institutions have much to learn from tertiary institutions like Harvard and Strathclyde universities.

The present position of Strathclyde University in respect of fund generation shows that tertiary institutions can stand on their own. With income from royalties of approximately £4 million per year, Strathclyde is in the top ten universities in the world. The university invested cash in a large, strong research consultancy service able to provide legal and financial advice (to staff and inventions of equipment). Some 15 commercial companies have been initiated utilizing the Business Ventures fund which was founded from internal resources.

Maybe even more important than research and consultancy services, has been the university's determination to initiate incentives and rewards into its internal resource budget system. Faculties which are successful in winning research contracts obtain financial incentives which include huge shares of the overhead earnings. Half the royalty from the primary invention Atracurium (an anaesthetic used in surgical operations around the western world) is returned to the inventor and his group, some of whom are now millionaires. This has provided the strongest possible incentive to other staff members to initiate inventions and theories (West 1996:130).
2.4.2.2 Learning alliances

Most universities around the globe have until recently functioned greatly at one or more removes from the place of work. Truly, most have debated and continue to advocate strong relationships between tertiary education and the world of industry and commerce but these relations have typically been founded on personal meetings or the particular needs of clinically or technologically based vocational degree programmes. There is a need to strengthen this relationship.

Within the United Kingdom there are now several tertiary education institutions in which employers do play a role in the administration of the institutions. The University of Warwick is one institution which is well recognized as having been specially successful in involving employers in some areas of its student learning experience. It gives a valuable example of the critical success aspects for effective partnership with industry.

From the university's early days in the 1960s, there was an emphasis on the establishment and maintaining of relations with industry. Partly because of the university's environment in the industrial region of the west midlands, there were special opportunities to improve links between engineering and business studies and the world of jobs. Two units of the university - the Warwick Business School and the Warwick Manufacturing Group - specially include the realization of those opportunities and they both hold international status.

The Warwick Manufacturing Group was built in 1980 with the objective of initiating a new national centre for applied research and the upliftment of top-rank engineers and engineering managers. The 1980s was an era of change for the British manufacturing industry. Industrial connections were starting to improve, privatization was on the cards and a basic restructuring of British industry was taking place. In this period most companies in the private sector realized that they were unable to recruit the quality of staff they would like (Biggs 1996:39).

There was a need for staff with up-to-date technological understanding, business awareness and industrial experience (Biggs 1996:39). It was for this reason that Warwick developed programmes aimed at improving "academic excellence with industrial relevance", within the larger objective of producing executives and managers who could successfully solve the problems of an engineering business (Biggs 1996:39).
The Manufacturing Group is now 90 per cent financed by industry. Less than 10 per cent of the group's activities is financed by the Higher Education Funding Council, mostly the undergraduate programmes. Most of the remaining 90 per cent of functions are financed by income earned through collaboration with industry. Those studying post-experience degrees, such as the Masters in Engineering or Business Management, are all fee-paying (Biggs 1996:39-40).

2.4.2.3 Increasing enrolment and declining resources

The changes in the British tertiary education system have caused tensions between the students, tertiary institutions and political parties. Many political parties believed that the financial burden of tertiary education should in the future be carried by the students themselves. Students and academics believe that the government and industry should play a major role, especially in assessing the poor. The decision by university vice-chancellors that newcomers should pay a £300 levy triggered tensions in the higher education community and in 1995 the British government introduced cuts in tertiary education funding. The cuts were not welcomed by the students.

2.4.2.4 Subsidy cut

The British government seemingly alarmed by the rising costs of assisting 108 universities and 50 per cent more students - costing £7 billion a year - grants have been decreased by 10 per cent per year since 1994. Universities and students voted but it was not until November 1995 that allocation imposed a 7 per cent decrease in overall university funding - including a cut of almost a third of capital funding - the revolt against the decrease in subsidy became strong (Young 1996:9).

Accelerated by alarm over the capital funding edict - after years of deferring maintenance costs on declining colleges, most of which were erected in the 1960s and are now in critical need of reconstruction - and an effective moratorium on purchasing large pieces of scientific equipment, the committee of vice-chancellors and principals decided on a crucial move. Its effectiveness seemed to be largely due to the new chief executive of the committee of vice-chancellors and principals (CVCP), Diana Warwick. Her main strengths as a fixer have “transformed an unguided missile into a steering committee”. The brilliance of the levy scheme in its threat to the middle classes, eagerly worded by politicians as the key to the next election unless the government made radical moves to respond to the universities’ demand - restoration of the capital financing and maybe a proportion of fees to be paid by students will be necessary. There is the politically unpleasant prospect of an unofficial tertiary education tax in an election year. Even though the CVCP does not make a move
as a whole, there is nothing to prevent individual institutions introducing levy schemes, opening up the unpleasant possibilities of some universities being denied to poorer students. Until now, students and universities were too occupied by their own problems to pay much attention to each other. But insufficient funds could affect both; a CVCP study in January 1995 discovered rising figures of undergraduates dropping out partly, they suspected, because of financial problems. Despite reciprocal sympathy between the students and universities for each other’s difficulties, there is no general agreement on a solution (Young 1996:7).

The CVCP favours tuition fees from students repayable under the Australian-style system as a part of income, possibly with maintenance treated in the same manner. The policy of the National Union of Students is for free education and a return to the 1979 grants level and other benefits. Unfortunately, the union is being down marked by some senior officials preferring the more practical approach but since some components of payment seems unavoidable, they should campaign for the better deal (Young 1996:7).

Politicians have been aware for several years that potentially unpalatable decisions were going to have to be taken, preferably by other people. Former education secretary, John Pattem, challenged the CVCP to begin to consider important solutions. Labour’s tertiary education spokesperson, Jeff Rooker, was fired for talking about the infamous graduate tax. The government dragged its feet as long as it saw fit but the CVCP’s threats may in the end compel it to take some action.

In many ways, the decision on tertiary education financing does not fall into traditional party lines. Although the Conservative Political Centre (CPC) scheme introduces that old Tory favourite, the voucher, the effect would be free tuition but student-financed maintenance. Labour appears to have sidelined tuition fees, while the education-minded Liberal Democrats would seemingly charge students one third. The two questions which should be understood are those of university and student funding. Should students pay at least half towards tertiary education from which they are surely to benefit financially? And how should they be assisted while doing so?

Though there is less general agreement on the first question, most authorities seem to agree that the current assistance system is a declining grant, now worth £1,885 per annum to students not living in London, plus loans which must be repaid within five years once graduates’ income is more than 85 per cent of the national average. It is not ideal, penalising the lower paid or those who took longer programmes. Many students are working to earn extra money either to make ends meet or to reduce debts. Possible alternatives include the Australian system, where students repay tuition
fees and maintenance at a rate determined by their earnings. The Labour Party, anxious to prevent an option of an extra tax, is surely to investigate the possibilities of such a scheme very carefully. A preferred point might be that if grants were completely done away with, the financial burden of a student could be totally carried by parents. But the important, and so far unanswered, question is the influence of prospective students. Applications are down about 1.5 per cent which the universities' and colleges' admissions service believes is partly because of fears over finance, while Secondary Heads Association president, John Dunford, has names of students who left university to earn money. He said "sixth-formers are extremely concerned about the level of debt. We should be looking for a better method of repayment than we have at the present" (Young 1996:7).

2.4.3 Increased enrolment

The prominent characteristics of the system of financing full-time first degree and diploma students in operation in the 1980s, had been put in place in the 1960s. The system was made to finance the education of comparatively a few élite (about 115,000 full-time students in England and Wales in 1992). By 1987 - 1988 when the White Paper on student loans was introduced, there were about 504,000 full-time first degree students and over the 1992 - 1993 period, 771,000 full-time first degree students in Great Britain (Lincoln 1996:8).

When the system was affordable the government did not find it a problem to supply a comparatively generous level of financing per student for both maintenance and tuition fees. Then the numbers of students started to increase. Governments became worried about the public expenditure implications. During the 1980s, with a government committed to strict control of public expenditure, the level of maintenance assistance was decreased and stricter requirements were imposed on the expansion of fully financed institutions. The totally financed institutions were also influenced by "efficiency savings", which implied a year by year decrease of two to three per cent or more in the subsidy per student. However, these little adjustments failed to achieve the desired restraint on the increase in public expenditure on tertiary education. This was mainly due to some tertiary education institutions continuing to enrol students on the local authority fee scheme (which was used for polytechnics before 1992).

The White Paper was followed by a loan system to assist student maintenance in the academic years 1990 - 1991. When the loan system was instituted it was assumed that the maintenance grant and parental donations would be held steady with low premiums and the loan facility would be expanded each year, to a consideration of the decrease in one actual value of the grant and parental
donations by inflation. The White Paper said that the loan component would rise until it was equal to the value of the grant and parental contribution (Lincoln 1996:9). Despite the restriction on totally financed institutions and the introduction of the loan scheme, student enrolment continued to increase (Lincoln 1996:9). This, in unison with the fact that the recession of the 1990s was serious and more prolonged than had been anticipated, led the government to take further steps to control expenditure on tertiary education. By 1992 the stricter control of fully financed institutions became a freeze on the total number of new enrolments. In the Public Expenditure Statements in November 1993, the government reported a ten per cent per year decrease (to run for three years) in the value of the maintenance grant, the decrease in the grant to be substituted by an increased level of loan. These changes have left vice-chancellors uncertain whether the decrease in subsidy will have a detrimental influence on the quality of tertiary education (Lincoln 1996:9). Students are worried about the level of grant assistance and there is uncertainty among academic staff about student problems and its influence upon the capability of students to continue with their studies. In connection to the latter, there is evidence of a rising proportion of students working longer part-time hours to earn income to assist themselves.

It seems to be extremely unlikely that either the government or the Labour Party would be prepared to supply enough additional financing for the increase of tertiary education from general taxation. Even though there was willingness to expand public expenditure, it appears likely that there are other priorities for both main political parties, namely the care of the increasing numbers of elderly and, in the one field of education, additional financing for nursery schools and 16-18 year-olds, seem to be higher priorities. The current arrangements do not seem to give a stable foundation for the long-term financing of tertiary education in the United Kingdom (Lincoln 1996:10).

2.4.3.1 Student loan schemes

The United Kingdom loan scheme is a mortgage loan administered by an autonomous body, namely the Higher Education Funding Council. The students are not asked to begin to repay their loans until the April after they have completed their courses. Currently most borrowers pay fixed monthly instalments over five years but can have a deferment if they can demonstrate to the authorities that their earnings are less than 85 per cent of the mean national income. The scheme is administered by a loans company wholly owned by the government but does not employ the national income tax system for collecting the payments. There are a number of criticisms levelled against the United Kingdom scheme: it is heavily subsidized and no real interest charges, because of this the scheme will not be able to sustain itself. The mortgage type loan is a financial burden after the completion
of a course and could deter rather than attract students. The scheme does not cover tuition and is not helpful enough. The mortgage type loan does not use the national taxation system, so it is expensive to collect repayments from students, therefore there is a high number of defaulters. The scheme does not set fixed monthly instalments for graduates, as a result the returns are low, threatening sustainability (Wilson 1996:116-118).

2.4.4 Types of student loan schemes

There are a number of possible arrangements for the financing and organization of tertiary education as any basic scheme can potentially be changed by a group of major or minor adaptions. The scale of functioning of any scheme can also be different. Here are seven schemes to be evaluated (Lincoln 1976:10). The advantages and disadvantages of each scheme will be identified.

**SCHEME A**

Maintenance: Means-tested maintenance grant  
Tuition: Publicly funded institutions  

This approximates the arrangements in the United Kingdom up to and including the period 1989-90. The assumption is that those entitled to a “full grant” receive a grant at the level on the same basis to the full grant plus loan of the system introduced in 1990-91. This scheme is included partly as a benchmark against which the changes resulting from the acceptance of schemes B to G can be evaluated (Lincoln 1996:10).

**SCHEME B**

Maintenance: Means-tested maintenance grant plus mortgage-type loan towards maintenance  
Tuition: Publicly funded institutions  

This is the package presently employed in the UK. It consists of publicly financed places in a Higher Education Institution (HEI) provided without charge to the student, and the maintenance grant of scheme A has been partly replaced by a publicly funded loan. The actual loan is repayable in equal instalments over a period of five years and is not means-tested, is provided at a zero real rate of interest. There is a restricted income stringent protection for the student as loan repayments are only needed when earning above 85 per cent of the national mean income (Lincoln 1996:12).
SCHEME C
Maintenance: Means-tested maintenance grant plus mortgage-type loan toward maintenance
Tuition: Partly publicly funded place with remainder financed by student with a mortgage-type loan available to cover their student contribution (Lincoln 1996:12).

The package is similar to those of scheme B but the loan component is bigger to enable individuals to meet a proportion (20 per cent) of their direct expense of a place. The loan is repaid over a period of five years as in scheme B (Lincoln 1996:12).

SCHEME D
Maintenance: Means-tested maintenance grant plus maintenance loan repayable via national insurance contributions (NIC)
Tuition: Publicly funded place

The grant component is similar to that of scheme B. A loan is available to be repaid by additional national insurance contributions. This package is often called a Maintenance Income Contingent Loan (MICL) system.

SCHEME E
Maintenance: Means-tested maintenance grant plus mortgage loan repayable via national insurance contributions (NIC)
Tuition: Partly publicly funded place with remainder funded by student with a loan available to cover the student contribution

A loan is made accessible to meet part of the expense of maintenance and part of the direct expenditure of tertiary education (like scheme C) but the instalments are made by additional national insurance contributions as in scheme D. The Fees Income Contingent Loan (FICL) component is the same as the Australian Higher Education Scheme (HECS) in which students have a duty to repay 20 per cent of the direct expense of each year of tertiary education they undertake. The same scheme also functions in New Zealand and Sweden.
**SCHEME F**

**Maintenance:**  Means-tested maintenance grant plus mortgage-type loan towards maintenance  
**Tuition:**  Publicly funded place with "top-up" tuition fees charged by individual institutions

The package represents a possible evolution without further state intervention of present arrangements (scheme B). The situation suggests individual institutions establishing "top-up" or "premium" fees which individual students should make own arrangements to finance the loan (Lincoln 1996:13).

**SCHEME G**

**Maintenance:**  More generous maintenance grant (not means-tested)  
**Tuition:**  Publicly funded place. Acceptance of this package comes with an obligation to pay a graduate tax

This package provides the student with the option of a boosted maintenance grant (not means-tested) and free tuition. In return, the student must pay a graduate tax until the age of 60. Alternatively, individuals who finance their own maintenance and pay fees which cover 20 per cent of their tuition expenses, sidestep the graduate tax (Lincoln 1996:13).

This scheme attracts an expanded student contribution to the expense of tertiary education on the grounds of a different principle from the one which underpins schemes B to F. In this package the students' final contributions depend upon the degree of benefit deducted from their education - those for whom tertiary education is a way to earning a high income make a bigger contribution than those who fail to get a well-paid job. From the perspective of society as a whole the scheme is one in which society is providing assistance to the student in return for an equity share of the principal capital of the student being assisted.

The graduate tax (GT) instalments can therefore be regarded as dividends rather than loan repayments (Lincoln 1996:13). This difference between the equity share principle and the loan principle which underpins schemes B to F is vital because an equity fund is especially relevant for risky investments. For many students on the brink of entering tertiary education the return on investment in education may look very threatening. For other individuals, like those from families with parental experience of tertiary education, investment in tertiary education is a less confusing
prospect, with the successful completion of a degree, followed by a well-paid career, the anticipated result of a decision to enrol at a tertiary institution. The latter group neither need to have state supplied rewards to enter tertiary education nor will they pay a graduate tax for the rest of their working life. Under this package this group have the chance to supply more of the financing of their tertiary education themselves, from families or by mortgage borrowing at market rates and therefore avoid the graduate tax. This group does not need to pay the total direct expense of the education as their increased income, flowing from their education, implies that they donate additional direct taxation for the rest of their lives (Lincoln 1996:14).

The above schemes show the government as the main source of funds. These schemes offer a variety of finance methods which suit a wide range of students from different backgrounds. But those from a poor background are still staring huge debts in the face because they will be forced to pay graduate tax or may have to start their working life with huge debts, resulting in them having to delay or even deny themselves basic requirements such as a house or a car. Most of these schemes are still passing the burden of tertiary education financing onto the shoulders of the parents and the students. Paying a graduate tax until the age of 60 years will, without a doubt, scare students off loan programmes and this will lead to many students dropping out of tertiary institutions, which is already happening. Many British students are in favour of income-contingency schemes which were pioneered by Australia. The scheme still closed the doors to the poor and favoured the rich or those whose parents have a tertiary background. Free grant programmes for the poor should be created to afford them the chance of tertiary education.
### Graduate tax

#### TABLE 1: THE RANKINGS OF BRITISH UNIVERSITIES BY THE UNIVERSITIES FUNDING COUNCIL

<table>
<thead>
<tr>
<th>University</th>
<th>UFC Score</th>
<th>Max</th>
<th>UFC (^{\text{a}}) Percent</th>
<th>Government Funds £</th>
<th>Full-time (^{\text{b}}) enrolment</th>
<th>£ per(^{\text{c}}) Student</th>
<th>Govt Grant as % of Budget</th>
<th>Library Volumes</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Cambridge University</td>
<td>121</td>
<td>130</td>
<td>93.08</td>
<td>47,165,100</td>
<td>12,219</td>
<td>3,860</td>
<td>51.0</td>
<td>4,200,000</td>
</tr>
<tr>
<td>2 Oxford University</td>
<td>96</td>
<td>105</td>
<td>91.43</td>
<td>47,612,257</td>
<td>13,072</td>
<td>3,642</td>
<td>47.3</td>
<td>5,000,000</td>
</tr>
<tr>
<td>3 Imperial College of Science &amp; Technology</td>
<td>73</td>
<td>80</td>
<td>91.25</td>
<td>34,888,854</td>
<td>4,984</td>
<td>7,000</td>
<td>53.0</td>
<td>475,000</td>
</tr>
<tr>
<td>4 University College, London</td>
<td>103</td>
<td>120</td>
<td>85.83</td>
<td>33,499,800</td>
<td>7,401</td>
<td>4,526</td>
<td>51.1</td>
<td>1,200,000</td>
</tr>
<tr>
<td>5 University of Warwick</td>
<td>53</td>
<td>65</td>
<td>81.54</td>
<td>21,558,900</td>
<td>5,701</td>
<td>3,782</td>
<td>55.0</td>
<td>650,000</td>
</tr>
<tr>
<td>6 London School of Economics</td>
<td>32</td>
<td>40</td>
<td>80.00</td>
<td>9,400,000</td>
<td>3,676</td>
<td>2,557</td>
<td>47.0</td>
<td>3,000,000</td>
</tr>
<tr>
<td>7 University of Bristol</td>
<td>48</td>
<td>65</td>
<td>75.38</td>
<td>35,682,560</td>
<td>7,188</td>
<td>4,964</td>
<td>62.7</td>
<td>2,000,000</td>
</tr>
<tr>
<td>8 University of Manchester Institute of Science &amp; Technology</td>
<td>48</td>
<td>65</td>
<td>73.85</td>
<td>19,160,640</td>
<td>4,067</td>
<td>4,711</td>
<td>52.6</td>
<td>3,400,000</td>
</tr>
<tr>
<td>9 Victoria University of Manchester</td>
<td>89</td>
<td>125</td>
<td>71.20</td>
<td>53,074,093</td>
<td>16,015</td>
<td>3,314</td>
<td>60.7</td>
<td>3,400,000</td>
</tr>
<tr>
<td>10 University of York</td>
<td>48</td>
<td>65</td>
<td>73.85</td>
<td>13,064,840</td>
<td>3,709</td>
<td>3,522</td>
<td>59.5</td>
<td>345,000</td>
</tr>
<tr>
<td>11 University of Essex</td>
<td>34</td>
<td>50</td>
<td>68.00</td>
<td>10,106,872</td>
<td>3,080</td>
<td>3,281</td>
<td>52.4</td>
<td>425,000</td>
</tr>
<tr>
<td>12 University of Edinburgh</td>
<td>97</td>
<td>145</td>
<td>66.90</td>
<td>56,851,836</td>
<td>10,041</td>
<td>5,662</td>
<td>61.3</td>
<td>2,000,000</td>
</tr>
<tr>
<td>13 University of Southampton</td>
<td>90</td>
<td>135</td>
<td>66.67</td>
<td>28,213,615</td>
<td>6,530</td>
<td>4,321</td>
<td>52.2</td>
<td>800,000</td>
</tr>
<tr>
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<td>53</td>
<td>80</td>
<td>66.25</td>
<td>16,051,931</td>
<td>4,532</td>
<td>3,542</td>
<td>56.0</td>
<td>500,000</td>
</tr>
<tr>
<td>15 University of Liverpool</td>
<td>91</td>
<td>140</td>
<td>65.00</td>
<td>41,979,948</td>
<td>7,556</td>
<td>5,556</td>
<td>68.0</td>
<td>1,000,000</td>
</tr>
<tr>
<td>16 University of Lancaster</td>
<td>58</td>
<td>90</td>
<td>64.44</td>
<td>15,480,646</td>
<td>4,587</td>
<td>3,375</td>
<td>74.0</td>
<td>770,000</td>
</tr>
<tr>
<td>17 Queen Mary College</td>
<td>45</td>
<td>70</td>
<td>64.28</td>
<td>13,264,970</td>
<td>3,692</td>
<td>3,593</td>
<td>60.3</td>
<td>275,375</td>
</tr>
<tr>
<td>18 University of Durham</td>
<td>48</td>
<td>75</td>
<td>64.00</td>
<td>19,292,676</td>
<td>5,105</td>
<td>3,779</td>
<td>62.4</td>
<td>665,000</td>
</tr>
<tr>
<td>19 University of Sheffield</td>
<td>76</td>
<td>120</td>
<td>63.33</td>
<td>35,956,737</td>
<td>8,052</td>
<td>4,466</td>
<td>66.4</td>
<td>950,000</td>
</tr>
<tr>
<td>20 University of Nottingham</td>
<td>85</td>
<td>135</td>
<td>62.96</td>
<td>31,045,736</td>
<td>7,132</td>
<td>4,353</td>
<td>61.0</td>
<td>900,000</td>
</tr>
<tr>
<td>21 University of East Anglia</td>
<td>44</td>
<td>70</td>
<td>62.86</td>
<td>16,319,616</td>
<td>4,364</td>
<td>3,740</td>
<td>65.0</td>
<td>600,000</td>
</tr>
<tr>
<td>22 University of Leeds</td>
<td>87</td>
<td>140</td>
<td>62.14</td>
<td>46,975,904</td>
<td>10,292</td>
<td>4,564</td>
<td>64.9</td>
<td>1,676,858</td>
</tr>
<tr>
<td>23 University of Birmingham</td>
<td>80</td>
<td>130</td>
<td>61.54</td>
<td>44,394,000</td>
<td>9,085</td>
<td>4,887</td>
<td>61.9</td>
<td>1,500,000</td>
</tr>
<tr>
<td>24 Newcastle upon Tyne</td>
<td>92</td>
<td>150</td>
<td>61.33</td>
<td>36,947,500</td>
<td>7,798</td>
<td>4,738</td>
<td>62.5</td>
<td>700,000</td>
</tr>
<tr>
<td>25 King's</td>
<td>70</td>
<td>115</td>
<td>60.87</td>
<td>30,783,000</td>
<td>5,815</td>
<td>5,294</td>
<td>62.0</td>
<td>800,000</td>
</tr>
<tr>
<td>26 Surrey</td>
<td>54</td>
<td>90</td>
<td>60.00</td>
<td>16,253,120</td>
<td>3,397</td>
<td>4,785</td>
<td>52.0</td>
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<tr>
<td>27 University of Exeter</td>
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<td>90</td>
<td>58.89</td>
<td>17,592,765</td>
<td>5,040</td>
<td>3,491</td>
<td>70.2</td>
<td>670,000</td>
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<td>29 Saint Andrews</td>
<td>41</td>
<td>70</td>
<td>58.57</td>
<td>14,008,067</td>
<td>3,624</td>
<td>3,865</td>
<td>65.9</td>
<td>750,000</td>
</tr>
</tbody>
</table>
TABLE 1: THE RANKINGS OF BRITISH UNIVERSITIES BY THE UNIVERSITIES FUNDING COUNCIL

<table>
<thead>
<tr>
<th>University</th>
<th>UFC Score</th>
<th>Max</th>
<th>UFC Percent</th>
<th>Government Funds</th>
<th>Full-time</th>
<th>£ per Student</th>
<th>Govt Grant as % of Budget</th>
<th>Library Volumes</th>
</tr>
</thead>
<tbody>
<tr>
<td>University of Reading</td>
<td>55</td>
<td>95</td>
<td>57.89</td>
<td>21,021,000</td>
<td>5,879</td>
<td>3,576</td>
<td>62.0</td>
<td>500,000</td>
</tr>
<tr>
<td>University of Glasgow</td>
<td>78</td>
<td>135</td>
<td>57.78</td>
<td>51,032,578</td>
<td>10,481</td>
<td>4,869</td>
<td>64.0</td>
<td>1,500,000</td>
</tr>
<tr>
<td>University of Bath</td>
<td>54</td>
<td>95</td>
<td>56.84</td>
<td>10,100,480</td>
<td>3,666</td>
<td>4,937</td>
<td>60.9</td>
<td>200,000</td>
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<tr>
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<td>75</td>
<td>56.00</td>
<td>11,043,273</td>
<td>3,140</td>
<td>3,517</td>
<td>54.7</td>
<td>450,000</td>
</tr>
<tr>
<td>University of Leicester</td>
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<td>95</td>
<td>55.79</td>
<td>20,033,582</td>
<td>4,857</td>
<td>4,125</td>
<td>63.7</td>
<td>800,000</td>
</tr>
<tr>
<td>Swansea</td>
<td>50</td>
<td>90</td>
<td>55.65</td>
<td>15,567,420</td>
<td>4,141</td>
<td>3,527</td>
<td>66.0</td>
<td>500,000</td>
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<td>5,740</td>
<td>4,457</td>
<td>61.5</td>
<td>1,000,000</td>
</tr>
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<td>University of Kent</td>
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<td>70</td>
<td>54.29</td>
<td>11,396,000</td>
<td>4,198</td>
<td>2,715</td>
<td>56.0</td>
<td>540,000</td>
</tr>
<tr>
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<td>135</td>
<td>53.33</td>
<td>13,043,808</td>
<td>5,646</td>
<td>3,339</td>
<td>64.0</td>
<td>650,000</td>
</tr>
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<td>70</td>
<td>52.86</td>
<td>21,353,649</td>
<td>5,217</td>
<td>4,093</td>
<td>58.5</td>
<td>600,000</td>
</tr>
<tr>
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<td>45</td>
<td>51.11</td>
<td>17,058,562</td>
<td>3,554</td>
<td>4,800</td>
<td>65.0</td>
<td>341,000</td>
</tr>
<tr>
<td>Royal Holloway &amp; Bedford College</td>
<td>33</td>
<td>65</td>
<td>50.77</td>
<td>13,732,180</td>
<td>2,763</td>
<td>4,970</td>
<td>78.0</td>
<td>400,000</td>
</tr>
<tr>
<td>University College of N.Wales, Bangor</td>
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<td>65</td>
<td>50.77</td>
<td>13,407,918</td>
<td>2,846</td>
<td>4,711</td>
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<td>400,000</td>
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<td>4,743</td>
<td>3,416</td>
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</tr>
<tr>
<td>University of Dundee</td>
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<td>49.00</td>
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<td>3,796</td>
<td>4,612</td>
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<td>460,000</td>
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<tr>
<td>University of Strathclyde</td>
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<td>125</td>
<td>48.80</td>
<td>29,362,332</td>
<td>7,546</td>
<td>3,891</td>
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<td>400,000</td>
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<tr>
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<td>80</td>
<td>48.75</td>
<td>17,032,851</td>
<td>4,341</td>
<td>3,483</td>
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<tr>
<td>Heriot-Watt University</td>
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<td>75</td>
<td>48.67</td>
<td>13,465,306</td>
<td>3,866</td>
<td>3,483</td>
<td>53.7</td>
<td>125,000</td>
</tr>
<tr>
<td>Queens University - Belfast</td>
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<td>130</td>
<td>46.16</td>
<td>34,388,085</td>
<td>7,360</td>
<td>4,672</td>
<td>67.0</td>
<td>950,000</td>
</tr>
<tr>
<td>University of Stirling</td>
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<td>70</td>
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<td>2,868</td>
<td>3,394</td>
<td>62.0</td>
<td>400,000</td>
</tr>
<tr>
<td>Ulster</td>
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<td>80</td>
<td>45.00</td>
<td>30,322,863</td>
<td>7,613</td>
<td>3,984</td>
<td>80.5</td>
<td>526,000</td>
</tr>
<tr>
<td>Brunel University</td>
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<td>70</td>
<td>42.66</td>
<td>14,321,934</td>
<td>2,914</td>
<td>4,915</td>
<td>61.6</td>
<td>280,000</td>
</tr>
<tr>
<td>City University</td>
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<td>60</td>
<td>40.00</td>
<td>18,800,480</td>
<td>3,166</td>
<td>5,307</td>
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<td>University of Keele</td>
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<td>40.00</td>
<td>9,957,259</td>
<td>2,829</td>
<td>3,250</td>
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<td>547,000</td>
</tr>
<tr>
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<td>15,407,260</td>
<td>3,649</td>
<td>4,222</td>
<td>58.0</td>
<td>300,000</td>
</tr>
</tbody>
</table>

Enrolment for the academic year 1986 – 87. Universities with a medical school are italicised. £ per Student is calculated by dividing Government funds by the full-time enrolment. The UFC ranking is based on this score. Part-time enrolment figures were not included. For some universities, such as Ulster, these figures are important.
The British university system is publicly financed through government grants that supply between 50 per cent and 80 per cent of their total earnings. Even if the British universities are largely dependent on government judgement for their earnings, each institution has considerable independence. During the past few years the financing method of United Kingdom universities has been distinguished by almost equal per student financing for each institution. The British universities, as shown in Table 1, do not show the wide difference in per student financing manifested in the United States of America universities.

In general, the average per student financing in British Universities in the academic year 1986-87 was £4 191, a deviation of £805. Considering currency exchange rates this would be an average of approximately $9000, a standard deviation of $3200. Therefore, the financing level for British universities clearly compares favourably with the financing provided for the American universities. The financing of the university of California at Berkley, the American university in the sample, compared to the financing of the British universities, particularly considering that the numbers for the British universities (such as Cambridge and Oxford) do not include endowment earnings from their elementary colleges, which is huge (Lindsey 1991:235).

The British tertiary institutions in comparison to the American tertiary institutions have a more egalitarian financing pattern. This is mostly due to the centralized system of government grants. The public universities in the American sample rely on financing from local authorities that have shown widely different levels of assistance.

A closer look at the data in Table 1 makes it clear how equitable the financing pattern in British tertiary institutions is (Lindsey 1991:235). Government aid for Cambridge and Oxford is in fact less than the average aid for all British tertiary institutions. This has resulted in some uncertainty among state officials who believe more should be done to consider the achievements and resource needs of Britain's highest tertiary institutions.

2.4.5 From University Grants Committee to the University Funding Council

As indicated previously the British University Grants Committee (UGC) was replaced by the University Funding Council (UFC). The UFC is smaller than the UGC and half of its members are drawn from the private sector. The funding pattern of the UFC is based on performance, that is, the UFC now distributes financial aid to tertiary institutions considering research
performance. This implies that the UFC has undertaken a major new approach to financing. Without any explanation, financing organizations have always taken into account the quality of research being done at a tertiary institution, but very few financing organizations have employed objective rankings to evaluate this performance. The UFC has come under strong criticism for its measures of selection (Lindsey 1991:235).

The information in Table 1 indicates the UFC rankings of British tertiary institutions (column 3, titled "UFC per cent"). It is evident that the rankings provided by the measures of performance employed by the UFC have face validity. Cambridge tops the ranking list followed by Oxford University and Imperial College. The inventions recorded at Cambridge University in the field of science have transformed the contemporary world. Both Oxford and Cambridge have traditions dating back to the thirteenth century. Without question, they are still centres of scientific and intellectual excellence (Lindsey 1991:235-236). With their long traditions, both universities have acquired huge investments. The endowment of Trinity College, Cambridge is legendary (Lindsey 1991:235).

There are several arrangements on the list. The UFC has introduced measures that have two significant qualities. Firstly, the measures consider the size and scope of the tertiary institution. The column with the title UFC score represents the raw score of research performance for each tertiary institution. The column with the title MAX, showing the size and scope of the universities' academic programmes, represents the maximum score the tertiary institution could have accomplished. The column with the title UFC percent represents the ratio of the UFC score divided by the maximum score. The UFC per cent score is employed by the UFC to develop its ranking of British institutions. Universities that are small but do what they do well, are not penalized by the ranking system. However, huge universities that commit themselves in many fields are measured on their performance in all fields. A portion of this evaluation strategy comes from the UFC's interest in financing centres of excellence.

The rankings were sent by Sir Peter Swynnerton Dye, chief executive of the UFC, to the British institutions reporting that the UFC would continue to finance research on the foundation of competitive evaluation of quality and to expand the proportion of resources that is budgeted selectively. The interest of the UFC is to employ these rankings to encourage the British tertiary institutions to strive for excellence and to reward performance with expanded finance but may leave most of the lower-ranked universities without the resources needed to accomplish
excellence. In short, funds are a causal variable (Lindsey 1991:236). It could be debated that such a financing approach could result in healthier universities growing and expanding, while the smaller universities are left to fade out. According to Shattock (Lindsey 1991:236), the new formula employed by the UFC has dramatically altered the financial state of many institutions. In the case of his own institution, Warwick, though doing very well, it was poorly financed. The formula has, thus, cured that and at the same time has withdrawn finance from other institutions.

Government organizations have a right and an obligation to utilize the funds wisely and therefore it makes sense for the UFC to provide funds on the basis of performance. However, this requires the system to be questioned with the understanding that financing can also be used to allocate the funds needed for an institution to be competitive. Furthermore, it is crucial to understand the part public institutions play in local and regional economic upliftment. Contemporary high-technology based industry needs the intellectual and scientific material that neighbouring public institutions produce. The most important role of public governing bodies should be to make sure that the resources necessary for competitive achievements are allocated to all tertiary institutions and then to provide additional funds to reward excellence (Lindsey 1991:256-237).

As mentioned earlier there was a noticeable difference between those British institutions that had a Medical School and those that did not. The institutions with a Medical School were almost twice as large, in terms of number of students enrolled and had higher per student financing. To a larger extent, it is this group that includes the most highly regarded British universities. The presence of a Medical School has a greater impact on the institutions in Britain (Lindsey 1991:246).

2.4.5.1 Polytechnics and College Funding Council (PCFC)

The changes occurring in English tertiary education are having an impact on the manner in which the whole system is managed and are likely to be forerunners of developments in the whole of the state educational system (McVicar 1990:19). At the centre of these changes is the developing work of the Polytechnics and Colleges Funding Council (PCFC).
For the PCFC to perform its major duties, the allocation of financing, it was recognized early on that it would require a series of data collection and control mechanisms, for example, PCFC was required to ensure that the accounting system in the now free colleges was adequate. It went further than what some tertiary institutional managers thought was necessary, however, when it set up several committees examining issues such as how to assess the quality of teaching and the development of performance indicators. The most significant original act of the council was to ask tertiary institutions to submit medium-term strategic plans. These have shown that the public desire to shift from "top-down" to "bottom-up" planning. Institutions were requested to publish a "mission statement" setting out what the college regarded as its role and place in the sector. This was to be seconded by well-noted plans for academic development, in terms of anticipated enrolments, related to actual projections of financial and physical resources. The PCFC stressed that it anticipated the plans to consider the effects of demographic factors on likely demand for Public Sector Higher Education (PSHE), each institution's relative share of the potential market and of its involvement in expanding access (McVicar 1990:19). The English tertiary institution's bid for funds was based on student enrolment. The bids were competitive and each institution submitted its bid for the coming academic year.

2.4.5.2 Competing for funds in tertiary education

Present financing of tertiary institutions was to consist of two components, a guaranteed bid and a competitive bid. Each tertiary institution would be assured of 95 per cent of the target student numbers for the academic year at a level of financing strengthened by 4 per cent for inflation. It would then bid, if it desired, for more student numbers at its own cost. PCFC, functioning within the framework of an expected 3% increase in financing for the sector, would then examine all the bids for the three groups of students (full-time, part-time and sandwich) in each of the programme areas and then determine what it wanted to buy.

To assist in the process of evaluating bids, the council created an Advisory Group for each programme area. These were to link individual bids to colleges' strategic plans and, with advice from PCFC, make recommendations. There were to be punitive measures for under-recruiting and reward for over-recruiting, particularly for more part-time students.
The PCFC assessed bids according to four factors:

- the desire to increase the system to finance as many places as possible in each programme area
- giving weight to student demands, informed by the previous admission strategies
- reward "quality", the PCFC would fund above average for quality performance
- choice of the most cost-effective bids (Pratt 1990:21) (McVicar 1984:21).

It is clear that tertiary institution managers faced a difficult task. Before October they had to compile their bids, to be approved by governing bodies and hand them to the PCFC. This was a major challenge to the managers (McVicar 1990:21).

The use of bidding has raised several problems for tertiary institutions. The other cause of problems is student fees. Not long ago these had been expanded to reflect government policy to make tertiary institutions function more within a "market". The interaction of the two major sources of finance is complex because tertiary institutions seemed to recruit students over those financed by the PCFC, depending on the fee income alone. The increasing of fee levels has strengthened the value of "fee-only" students. In the PCFC sector, tertiary institutions have had the further reward that the bidding process provided a way of maintaining PCFC funds for fee-only individuals, by successfully bidding for enough students to cover fee-only admissions for its allocation of funds for the coming academic year. However, PCFC is requesting institutions to admit 90 per cent of the previous year's students of full-time and sandwich fee-only students, an act generally regarded as decreasing the rewards for institutions to recruit students, since they cannot subsequently cover them by PCFC financing (Turner 1992:37).

The overall system is therefore highly complicated, with an institution's financing relying on a wide range of aspects including success or failure in the bidding process, the extent of students recruited on a fee-only basis, traditional financing levels, and the size of the institution, not to mention trivial rule changes which the PCFC creates from time to time. Because of the different situations in which institutions find themselves, it is difficult to trace a pattern in financing or to generalize about the effects of rule changes (Turner 1992:37).
2.4.6 **Conclusion**

The British tertiary education system has experienced a number of radical changes. As elsewhere in the world, the British also wanted to increase access but in the last decade the government cut subsidies and the enrolment decreased rapidly. Britain, like the United States, favoured the market model for their tertiary institutions, that is, tertiary institutions should raise additional funds by "selling" their services to the private sector or the government. The alliance of British tertiary institutions and industry is a bold step in the right direction and South Africa should learn from this model because it means there is greater participation of the private sector in tertiary education. This in turn will guide programmes and improve the quality of graduates in tertiary education.

Departure of the British tertiary education system from the traditional 48 universities to polytechnics is of vital importance because it emphasised Britain's objective of training skilled people in technology, which is of crucial importance in the modern world. These polytechnics are free corporations and not under the local government anymore. Thus they can generate additional sources of finance.

The amalgamation of the University Funding Council (UFC) and the Polytechnics and College Funding Council (PCFC) into the Higher Education Funding Council of England (HEFCE) in 1993, placed the British tertiary education system in a better position to deal with financial problems. English universities enjoyed the autonomy denied to those in most other countries around the globe.

The British government was also successful in encouraging tertiary institutions to raise additional funds and the results were pleasing. Strathclyde University and Warwick University are shining examples of successful British tertiary institutions. Like Muskingum College and Harvard University in the United States, they have survived during hopeless times of subsidy cuts and government under-spending. The invention of Atracium has made Strathclyde investors millionaires. The manufacturing group of Warwick University receives 90 per cent of its funds from industry. The Higher Education Funding Council finances less than 10 per cent.
Amid these successes, there is a black spot in the British tertiary education system, namely the rising figure of undergraduate dropouts, the main reason being financial problems, although there can also be other reasons such as social background. There are many loan schemes and methods of repayment which are sophisticated, complex and complicated to understand. Many students do not want to start work with a heavy debt. This is a common denominator in the financial problem, whether in the United States, Britain or South Africa: no graduate wants debt. British students are against the graduate tax and mortgage loans. They favour income-contingent loans. The poorer students will not be pleased with any scheme that will put them in debt because they do not have the protection of the government if they cannot find employment soon after graduation.

Despite the mutual sympathy between the student, tertiary education institutions, government and parents for one another's problems, there is still no general consensus on a solution. Although there was the willingness on the part of the government to expand education expenditure, it appears that there are other priorities such as care of the increasing number of elderly and additional funding for nursery, primary and secondary education. Tertiary education occupies the bottom of the list because it is still regarded generally as a luxury - "the education of the rich".

SECTION B : DEVELOPING COUNTRIES

2.5 Tertiary education funding in Australia

2.5.1 Introduction

Australia and South Africa are faced with the same financial problems in tertiary education. Both in Australia and in South Africa enrolments are expanding rapidly, while resources are declining. Australia has made considerable progress in solving its financial problems in tertiary education. South Africa can learn from Australia's experience. Australia and South Africa's economies place the two countries above the rest of the developing countries. Both are half way towards the developed world. Both countries have made substantial progress in the development of tertiary education if one compares the white universities in South Africa to those in Australia. These institutions can hold their own against international tertiary institutions in terms of research.
Tertiary education in Australia showed consistent progress in a relatively calm system over the 30 years from the Murray Committee to the accession of John Dawkins. In about a decade since 1987 tertiary education has been transformed. Enrolments have expanded by more than a third. Financing, particularly capital funding, has risen considerably. The number of tertiary institutions decreased by a half. The binary system was abolished. The commonwealth’s administration of tertiary education has been revolutionized. The aspects concerning balance of research and instruction have been changed, though it is not clear in which direction the balance has been modified. Resources have not grown on the same level with enrolments (Karmel 1992:141).

Australia is a federation and education is the responsibility of the state. Thus tertiary institutions are established under state legislation. But since 1959, the Commonwealth Government has made funds available to the state for the funding of tertiary institutions (Taylor 1991:246).

Initially the Commonwealth Government shared the financing equally with the states, but in 1974 fees were abolished and the Commonwealth Government took over the full responsibility of funding. Later the National Board of Employment, Education and Training (NBEET) was established. It is purely advisory and tertiary institutions have to deal directly with the Department of Employment, Education and Training (DEET) (Taylor 1991:247). Though the DEET does not have legislative power over tertiary institutions, the Commonwealth Government has the authority to control through conditions attached to the grants. The DEET can also exercise control over salaries and employment conditions (Taylor 1991:247).

2.5.2 Prior to the unified national system

The binary tertiary educational system had only 19 universities and 44 colleges of higher education. The universities received more funds than the colleges. The numbers of students and teachers were evenly spread, but were differently spread due to the universities’ roles in research and the research training for postgraduate degrees. The universities and the colleges had common teaching loads (student: staff ratios of 12:5 and 12:8 respectively). On the other hand the universities had a greater number of research students (7.1 per cent of enrolments) in comparison with 0.9 per cent at colleges. Furthermore the universities had a substantially higher number of support staff and “research only” staff; both academic and support staff were
greatly financed by the private sector except in the case of the Australian National University (Taylor 1991:247).

2.5.2.1 The binary system

The current arrangements for the financing of tertiary education involve a high degree of centralization. In its clearest form this can be detected in the continuing involvement between individual tertiary institutions and DEET. DEET has an on-going relationship with institutions on a daily basis and tertiary institutions received more than 800 pages of correspondence from DEET annually. Furthermore, huge statistical reporting is needed resulting in annual profile discussions. Tertiary institutions are also required to answer a series of reports emerging from DEET and other government departments (Karmel 1992:141). Institutions are also required to respond to government recommendations, of which there have been more than 40 main ones during the past five years, including six in the ministerial policy document. Another factor of centralization is the obligation put on institutions to operate within the framework of national priorities.

The main point against centralized authority is that each tertiary institution knows best how to manage their affairs, and truly will manage their institutions more efficiently and effectively than a central organization. They will be guided by external circumstances, world trends and views of their government. It should be considered that in the end it will be necessary to have a decentralized, deregulated system, for such a system would fare better than one managed by a central authority (Karmel 1992:142).

The increase in tertiary education since 1987 has ushered in a new era for the tertiary institutions' expanded financing to cover both running and capital expenses. But maintenance grants have not increased at the same pace as enrolments. Furthermore most universities have necessarily been allocating resources to other aspects such as equal opportunity, access programmes, occupational health and safety, research activities and management plans - all important priorities. The result is that many institutions are currently under-funded for undergraduate teaching objectives. This has been proved by declining staff-student ratios, larger classes and decreased tutorials. Those universities which have established a considerable infrastructure to assist scholarship and research are feeling the burden of maintaining them and cannot expand them. Other universities have been successful in
diversifying their source of finance, but most funds are connected to particular requirements and do not play a role in undergraduate teaching or in maintenance. Indeed universities require the ability to raise additional funds to maintain the service they provide.

The rapid expansion of tertiary education over the last couple of years itself triggered the question of the exact size of the tertiary education sector (Karmel 1992:145). Tertiary education was run over the period 1974-87 by central government financing with tight regulation. During the last four years intervention has become stricter and tertiary institutions have been seen by the Commonwealth Government as subject to state policies. Despite the advantages emanating from larger funding and more competition among institutions, the result seemed damaging. Deregulation seems to be the answer (Karmel 1992:146).

2.5.2.2 The unified system

In 1987 the Commonwealth Government published a Green Paper for analysis, which suggested the elimination of the binary system and the establishment of what is called a Unified National System. It was followed by a White Paper. For institutions to affiliate to the system and qualify for full state funding, they had to have student enrolment of more than 2000. This implied that unification would be needed and many did take place, sometimes with difficulties and problems. Currently, out of 63 institutions only 35 have remained and the process is not yet over, the most common unification being those where one or more colleges were affiliated to an existing university. But there were numerous cases where a college, or a group of colleges, became a university. This change was accompanied by recommendations about how funds were to be allocated (Taylor 1991:248).

In initiating the Unified National System the state sought to bring about far more than changing universities to colleges or vice versa. These institutions were forced as a requirement for membership of the system to commit themselves to abide by certain government policies and would be financed to work within a "framework" approved by DEET (Taylor 1991:249). This "framework" or "profile" is aimed at describing not only an institution's pattern of student programmes and enrolment objectives, but also its relations with the Commonwealth Government's policies pertaining to such issues as credit transfer and equity access. As to equity access the government will need institutions to initiate strategies and objectives for the
provision of expanded aid to different groups of disadvantaged students and to channel resources according to the area (Taylor 1991:249; Ferris 1992:507).

In allocating funds to tertiary institutions, the government has made some greater and more rewarding departures from initial practice, especially by accepting to supply funding on a "rolling" triennial basis. This is of vital importance and permits much safer and more stable planning than was the case when institutions were funded annually. The government has also made the provision of funds to institutions simple. Initially there were separate funds from operating costs, equipment, a special research vote and minor works; these are currently unified in a single package.

In addition, the government has reorganized the total budget which has resulted in considerable problems. Initially, institutions received 99 per cent of the nominal grant. The 1 per cent is reserved for provision by DEET for short-term research projects submitted by tertiary institutions in faculties specified as being of "national priority". Substantial amounts have been taken from the nominal vote of the "pre-unified" universities and transferred to the Australian Research Council (ARC) for competitive bidding for research grants (Taylor 1991:249; Ferris 1991:507). This sum was Aus $5 million in 1988, increased to Aus $40 million in 1990 and Aus $65 million in 1991. The deduction is only 5 per cent of the operating grants of the "pre-unified" universities. The effect of removing 5 per cent of the total is therefore magnified by a factor of six, and effectively decreases the infrastructure by approximately 30 per cent. The bulk of the deduction may well return to the institutions through research grants. Some of the results of this reduction will be solved by a special allocation of funds (Aus $107 million for a three-year period) which will serve to provide infrastructure but only on application and only for a good reason (Taylor 1991:249).

One factor of funding which influences the total funds available to the government has been the introduction in 1988 of the Higher Education Contribution Scheme. Fees are not charged, but a full-time student receives a tax debit (Aus $1 882 per annum) which is to be paid, as a surcharge on current or future taxable income, if it is more than a certain figure. In 1990-91 the surcharge started at 1 per cent at about Aus $25 000 annually, increasing by 3 per cent if the taxable income is more than Aus $40 000. These different amounts are indexed every year in relation to inflation. It is also feasible for this to be discharged by advance payments at the time of admission, with a discount of 15 per cent. In an attempt to encourage postgraduate work, 18
exemptions for postgraduate individuals are available, but the total income from this scheme is expected to increase to approximately Aus $625 million annually by 2001. This is the main source of the additional funds needed for the expansion of the Unified National System (Taylor 1991:250).

From the above, it is clear that the government aims at increasing student enrolments quite radically. The student load is aimed to rise from about 323 000 to 357 000, a rise of 10.5 per cent. Total tertiary education funding over the interval is expected to rise from Aus $3 234 million to Aus $3 634, which is a rise of 12.4 per cent. If the capital grants and the financing for the Australian Research Council and other special aspects are eliminated, the operating grants of the institutions are seen to rise only from Aus $2 816 million to Aus $3 094 million, a rise of 9.8 per cent. This shows a decline in the mean operating grant per student over the above-mentioned period (Taylor 1991:250).

2.5.3 The Dawkins revolution

The Dawkins revolution in Australian tertiary education is a radical break with tradition. The revolution was directed at encouraging system growth, economic relevance, greater equity and access, as well as greater efficiency, without compromising academic quality, flexibility, freedom, autonomy or independence. In difficult times of economic turbulence and budget cutting, it was designed to get more for less government funds. However this caused many difficulties and as yet has not successfully solved many of them. It has been compromised by an unfounded faith in the feasibility of redistribution within tertiary education and substantial efficiency profits. Strict financing limits and a rising tendency towards bureaucratic uniformity have caused considerable problems without creating an equal forum for all universities. The relative financing model exercise and the restricted amounts of new funds for a three-year period ensure no early end to monetary pressure (De Angelis 1992:37).

In particular, the management of over-enrolments and the lack of consistency on the financing of various discipline mixes in the critical 1988 to 1990 period caused considerable new inequalities and abnormalities. Consequently smaller (newer) universities tended to suffer rapid and larger budgetary decreases than the older, established institutions as a result of these shortcomings (De Angelis 1992:37).
it seems unlikely that the expense of the Dawkins creations can be included within the resource ceilings now in place. After more than a decade of financing erosion which the Dawkins period has accelerated and with the explosion of financing needs in the late 1980s and early 1990s, monetary limitations constitute a serious threat to the quality of tertiary education and to Australia's international academic status (De Angelis 1992:37).

2.5.4 Higher Education Contribution Scheme (HECS)

On the suggestion of the Wran Committee Report, the Australian government introduced the first improved university tuition charge since fees were done away with in 1974. This was in response to two factors. The judgement that the fiscal limits implied that it was not feasible to continue to fund a burgeoning tertiary education system almost single-handedly from general taxation revenue. Secondly, the view that having charges was not progressive in a lifelong perspective, given that students came from advantaged socio-economic positions and received substantial rewards for being graduates. The above reasons have a common ring to them as justification for pricing the use of an institution's service. But the newly created Australian Higher Education Contribution Scheme (HECS) has a character which makes it unique internationally. The charge was only compulsory when a student's or former student's annual earnings was equal to or more than the average income of working Australians (Chapman 1996:43).

HECS in 1996 saw undergraduate students charged Aus $2,442 (at the current exchange rate, this is equivalent to approximately US $1,830) for full-time annual tertiary study. The HECS can be paid on enrolment with a discount of 25 per cent (1996) (implying a full-time up-front charge of Aus $1,832), or delayed until students' income averages the current taxable earning of working Australians of Aus $27,675 per year. Most students (about 75 per cent) choose to delay payment and the instalment is repaid below interest rates depending on income. Therefore if a student selects to postpone payment, the instalment becomes a debt due to the Australian government. This debt does not have an actual rate of interest. Income thresholds are determined by price inflation (Chapman 1996:43).

The "income-contingent" origin of the scheme is its most significant defining feature. In many countries around the world, tertiary institutions charge for tuition, loans to help students and are repaid to commercial banks over a limited duration and do not consider the current situation of the former student. Mortgage-type loans are less popular from a political point of view than
income-contingent loans because there is little or no interest on debt is a matter of great concern. It implies that those former students whose income is low over their lifetimes are provided with bigger subsidies in the form of clear access to an interest-free loan. This type of subsidy can be huge, as Chapman and Ghia (1993) have mentioned, male lawyers, owing to their high income, pay from 30 to 50 per cent more than members of the public sector who stay half a decade out of the labour force after graduation. The question of loan repayments needs attention and has dominated debates around the world. How is Australia coping?

2.5.4.1 Higher Education Contribution Scheme revenue

Australia uses income-contingent repayment mechanisms to cover tuition and living costs. Currently the government receives about Aus $400 million from HECS (8 per cent of the higher education budget), a figure which has increased quickly as more former students pass the first income threshold. Recently, around 20-25 per cent of total enrolments have accepted the up-front package and in the 1992-94 period this method of repayment provided over Aus $400 million in total to the government. If the repayment stabilizes it is anticipated that yearly receipts could be Aus $700 million, or approximately 15 per cent of total government outlay (Chapman 1996:44). Presently debt owed to the Australian government is approximately Aus $4 billion.

The relationship between the duration of a former student's repayment and his/her life cycle, needs to be revised. According to Ann Harding (1994) on the basis of present anticipated future graduate earnings, the average male enrolling at age 18 will repay the debt from a four-year degree in full by the age of 34. For females, the average age of total repayment is 40. This gives women an advantage of six years of an actual interest rate subsidy (Chapman 1996:44).

Another important aspect from these exercises is that a substantial number of the women are not obligated to repay HECS over the duration of their lives. The arrangement is as follows: men are anticipated to repay 93 per cent of HECS by the age of 65 but the figure is 77 per cent for women, that is, in general the government will not recover approximately 15 per cent of the "on-paper" debt, coupled with zero interest rate (Chapman 1996:44). If the funds are not repaid it will result in having debt collections rely on private incomes. The HECS funds are safeguarded by legislation and would not be diverted or transferred to be used for other purposes. The HECS debt is transferred from consolidated revenue to the Higher Education Trust Fund, which will ensure that funds are used only for Higher Education activities (Chapman 1996:44).
2.5.4.2 Higher Education Contribution Scheme debts

The HECS is acknowledging the difference between original “mortgage-style” loans and the structure of the loan implicit in the HECS postponed fee. The original or normal loan package involves the borrower's repayments being spread over a particular duration - the term of the mortgage. In most cases no consideration is taken of changes in the borrower's situation over the period, either for "better or for worse" - the terms remain. Thus the borrower is given no protection against loss of income - repayments are due within the stipulated period of time.

But HECS-style loans are different. Repayments rely upon the borrower's income. If the stipulated level of income is not reached, the borrower is not forced to repay. But if the income is exceeded, the borrower is anticipated to repay at a higher rate.

The fundamental difference between these loans is that the income-contingent variety functions to safeguard low-income earners and those who generally do not gain financially from the investment in place. Furthermore, as mentioned earlier, the debt incurred is free of actual interest rate, implying that there is a clear subsidy to those who opt for the longest repayment period. The combination of an income level or threshold for repayment and the absence of a real interest rate imply that low-income earners are provided with a strong degree of safety against bad circumstances. In fact, what HECS provide is a form of “default insurance”, that is, the former students do not have to carry the expense of defaulting on their debt. This is directly opposite to a mortgage-style loan in which the expense of defaulting on the loan are very high indeed.

Default protection solves the basic problems of would-be borrowers inherent in mortgage-style loans. This sorts out the possibility of a graduate being unable to repay a loan, or only being able to do so with difficulty. But when there is no opportunity of default, as evidenced under HECS, the issue vanishes (Chapman 1996:46).

2.5.4.3 Advance payments

Another feature of the income-contingent scheme is the rate of payment upfront. When HECS was proposed, the Wran Commission suggested that the approximately AUS$45 million would be paid “up front” if no discount was given and AUS$55 million would be paid upfront if a 40 per
cent discount was given. Eventually a discount of 15 per cent was accepted. From the start 10 per cent of the students paid upfront - generating AUS$82 million. One visible irregularity is that students and their families would have benefited more if they had invested the contribution money repaying the HECS debt with the money accumulated in the investment. The implicit rate of interest established into HECS was smaller than a rational rate of return found on financial instruments, thinking that graduates would pay on time. After a long period, the decision of paying upfront are above estimates. The funds collected upfront and voluntary repayments in 1995 were anticipated to amount to AUS$250 million, or one fourth of the total revenue collected from HECS (Wagner 1996:13-14).

Many are calling for upfront university fees, scholarships and maybe yearly student loans as the answer to the alleged budget problems staring government in the face. However, this is emphasised without a thorough knowledge of the fundamental economic matters involved. Many former students do very well in terms of lifetime income rises after obtaining a university degree. Many students do not finish or complete their degrees and will not acquire a job available to graduates. In addition, unemployment exists and graduates always have to choose between low- and high-paying employment (Chapman 1996:49).

This problem implies that some students will naturally be unwilling to borrow to pay fees even if the finance is readily available. This will occur more likely to students from disadvantaged or low-income communities who are even without property to sell or parents to assist them when the bank needs payment. There is still a reluctance from the poor to borrow for tertiary education (Chapman 1996:49). This can be eliminated by educating people about credit management. In this case, talents are wasted through the establishment of barriers to entry into tertiary education. This strengthens the inequalities in society against the notion of a “clever nation” and deny the poor the right to better education and a better life.

Chapman (1996:49) recommends that giving loans to poor students will solve this problem but argues that students may use the loans for personal purposes. The student will also delay his/her stay at tertiary institutions to support his/her family.

Any recommendation of upfront fees means taking into consideration that a loan mechanism is a must or it is unavoidable that some talented and determined prospective students will be excluded from tertiary education. Furthermore the loan mechanism should give some sort of
default insurance to guard against problems when repaying their debt, that is, repayment based on future income. Presently the HECS is attempting to solve these problems. When graduates are unable to pay, they end up placing the burden on the family (Chapman 1996:49).

The Higher Education Contribution Scheme was introduced in 1989 and was the world's first national income-contingent charging mechanism for tertiary education. HECS is not popular in Australia as a fair and moderate way of repayment for university tuition and living expenses. It is presently supplying approximately 10 per cent of the direct public sector expense of tertiary institutions and the figure will increase in the coming years, even if the government does not increase charges. In the economics of education there are clear reasons for supporting income-contingent methods in the funding of tertiary education. An income-contingent approach goes a long way towards removing barriers to the participation of those from poor backgrounds in tertiary education because the participation of all groups in Australian tertiary education has risen since 1988. This indicates that important expansion has taken place which has resulted partly from the promise of future monetary resources enhanced by the establishment of the repayment mechanism (Chapman 1996:50). This is not to say that HECS is the right and only mechanism of repayment. The HECS lacks pricing signals and critics argue that a zero real rate of interest are unsuitable on the basis of unsustainability.

But above all, as Kenneth Bouldings (in Chapman 1996:58) said, "If something exists, then it is possible". The Higher Education Contribution Scheme in Australia works well. It should be noted that variations of income-contingent repayment schemes exist in the United States of America, Canada, New Zealand, the Czech Republic, Botswana and Malaysia (Chapman 1996:50).

2.5.5 Private sources

With subsidy cuts from the government and increasing enrolments, many countries are searching for additional private sources to finance higher education. The most common source of private funds comes from industry, endowments and donations. In Australia the government is still the main source of funds for tertiary education.
2.5.5.1 Endowments and donations

Australian tertiary education institutions have not attracted enough philanthropic assistance noticeable in some other countries, especially the United States of America. This may support the opinion in Australia that tertiary education is the responsibility of the government, not the community at large. But without doubt attitudes and circumstances are changing and industry, public and private foundations, alumni and individual bequests and donations are starting to pour into the coffers of the universities and Colleges of Advanced Education (CAE) (Dawkins 1987:82). There are also emerging commercial transactions between corporations and tertiary institutions.

2.5.5.2 Commercial transactions

Funds are earned from joint commercial ventures, consulting, royalties and patent rights, overseas student fees and hiring out of equipment and facilities.

Since independence, approximately 40 tertiary institutions have introduced consulting and research companies. By 1986 these companies earned Aus $100 million and are expected to grow in the future. Expenditure on contracts to approved institutions, including tertiary education institutions, has increased from Aus $26 million in 1985-86 to Aus $44 million in 1986-87. Expanding aid for the scheme by industry and improved relations generally between the business sector and tertiary education research organizations, have attracted more of this capital aid for tertiary institutions (Dawkins 1987:83).

Overseas students who pay full-fees provide another significant source of potential revenue increase. The response to the present overseas student programme shows that there is an international call for bidding price, high quality Australian tertiary education programmes. Enrolments have grown from approximately 500 in 1986 to a little over 1000 in 1987. These are unevenly distributed with about three-fifths attending Darling Downs CAE and Curtin University of Technology. There is a drive for Australian institutions to expand their overseas enrolments, although competition from overseas institutions, including the United States of America and the United Kingdom, will be stiff and will place a ceiling on the admissions and not income accumulated (Dawkins 1987:83). Uncontrolled over-enrolment and shortage of academic staff are an obstacle to expansion of overseas enrolments.
2.5.6 Over-enrolment and academic staff shortages

In the wake of changes, the Australian tertiary education system was faced with massive expansion in the number of students enrolled. The number of students has increased by 100,000. In 1991 the number was 526,708 in comparison to 482,197 in 1990. The Commonwealth boosted tertiary education outlays in order to fund this expansion, both in actual arrangements and as a proportion of the whole government expenditure. From 1991-92, the Commonwealth pumped more than Aus $3.6 billion into tertiary education, an increase of 5.2 per cent on the 1990-91 amount of Aus $3.43 billion, which was 12.4 per cent more than the 1989-1990 figures of Aus $3.02 billion (Lewis 1991:3).

According to Lewis (1996:4) by 1991 the number of full-fee paying overseas students reached 20,663 - an increase of 22.5 per cent on the 1990 figures. In the forefront in this race have been the large city-based universities such as Monash and the University of New South Wales, both with approximately 2,000 overseas students. The newer universities (former CAE) have reported the highest percentage expansion in overseas student enrolment, despite smaller beginnings. Some institutions have recorded a 50 per cent increase in foreign students.

The universities are charging overseas students thousands of dollars above the minimum course fees determined by the DEET. The minimum price for a degree in engineering is Aus $10,000. By 1991, Melbourne University exceeded this charge by Aus $6,000. On the other hand Curtin University charged Aus $4,400 above the minimum fee. The minimum charge for a degree in veterinary science for the same year was Aus $13,700. The charge by Murdoch University was Aus $25,000. Owing to these policies, some of the largest Australian universities receive Aus $30 million or more yearly from overseas students. Are students getting what they expect? Says Eugene Tang: "We do feel very bitter because we come here and we pay a tremendous amount of money and what we are getting is no way close to what we are paying for. In many cases what we are getting is certainly worse than what the local students are getting" (Maslen and Slattery 1994:178-179). The campuses are overcrowded and intolerable to students who pay huge sums of money. For example, in commerce, overseas students pay up to Aus $11,000 annually and they are not sure of finding a chair in lecture halls let alone a table (Maslen and Slattery 1994:179).
The crisis of over-enrolment reached boiling point in 1991 as the combined negative effects of the recession and the federal government's quest for the "clever country" gained momentum. In addition, an increase in the grade 12 retention rate and a stricter labour market have resulted in traditionally high levels of enrolments in tertiary institutions. Statistics provided by the Australian Vice-Chancellors Committee indicates that some tertiary institutions have over-enrolled by more than 15 per cent. National over-enrolment numbers stood at 4.6 percent in 1991 against between 1 and 2 per cent in previous years.

The federal government supplied financing for 350 520 Equivalent Full-Time Student Units (EFTSU) in 1991, but tertiary institutions enrolled 366 549 EFTSU, causing a huge funding shortfall. Victoria and Western Australia are badly affected regions, the two average over-enrolments of 7.6 per cent, closely followed by ACT with 6.9 per cent and Queensland with 5.7 per cent (Lewis 1991:5; De Angelis 1992:38).

According to Lewis (1991:5) the government's push to create access to universities or other tertiary education has been accompanied by a shortfall in the number of academic staff. The National Institute of Labour Studies (NILS) at Flinders University, presents a disturbing picture: a shortfall of about 20 000 academics by the next decade and few optional recruiting opportunities for the tertiary institutions to follow (Lewis 1991:5).

2.5.7 Conclusion

The Australian tertiary education system has undergone many changes during the past two decades. Like many countries around the globe it aimed at increasing access to tertiary education especially amongst the poor. The government being the main source of funds, many universities cannot expand due to a lack of funds. Indeed Australian universities need to raise additional funds from the private sector to maintain the service.

There was uncontrolled expansion of the student population in tertiary institutions and the government could not cope with the increase. Australian tertiary education is centralized. Each tertiary institution has to deal with the Department of Employment, Education and Training (DEET) directly. The DEET acts as a buffer between the government and tertiary institutions. Tertiary institutions must abide by certain rules and will be funded to work within a "framework" approved by the DEET and aid is extended to disadvantaged students. The funds are allocated
to tertiary institutions for a period of three years. The system of separate funds was unified in a single package.

At first the system appeared to work very well but over-enrolment and lack of consistency in the funding during the critical period from 1988 to 1990 caused substantial new problems in tertiary education circles. Smaller universities suffered more quickly due to budget cuts than older universities, who attracted foreign students paying high fees. The Higher Education Contribution Scheme (HECS) came into the picture and students who took loans from this fund could only repay the balance once their earnings equalled or exceeded the average income of a working Australian. The payment can also be delayed or postponed without interest. This was an important step from the traditional "mortgage loan". The Australian income-contingent repayment mechanism proved to be popular in Australia and around the world because of its flexibility. On the other hand this led to a huge debt amongst students. Many students did not pay their instalments and the student debt amounted to Aus $4 billion. In short, the income-contingent has many loopholes and can easily be exploited by default students because there is no protection against it, but having said that, the funds from HECS are safeguarded by legislation and cannot be used for other purposes or transferred. Men are expected to repay 93% of the loan by the age of 65. The difference between the mortgage loan and income-contingent scheme is that in the case of the latter, low earners are protected and there is little or no interest. Another characteristic of the income-contingent scheme is upfront payments: "upfront because they offer discount of up to 15 per cent on the loan".

South Africa, like many countries around the world, could learn from Australia's income-contingent loan scheme which is popular around the globe. But, looking at the student debt in Australia one will advise those who employ this loan scheme to have a thorough plan and enough knowledge and management skill to avoid mistakes made in the Australian system.

2.6 Funding of tertiary education in India

2.6.1 Introduction

India is one of the most populated countries in the world. It is interesting to study India in terms of how she is coping with her vast student population. There are approximately 130 universities and 5 000 colleges in India. About one-third of the total government recurring cost on education
is allocated to tertiary education. This is not enough to give substantial tertiary education to the 3.5 million students registered. The financial resources that are injected into the tertiary education system have been expanding at an alarming speed, more rapidly than the general economic indicators, but the requirements of tertiary institutions have been expanding at a faster rate, in the process continuously widening the gap between the two. This situation of "increased expense and declining earnings" has resulted in a crisis or near crisis, which has been a fundamental feature of the Indian universities (Tilak 1988:603).

Around the world, tertiary education systems are continually starved of financial resources. India is a case in point. The latest trend in the funding of tertiary education in India is disturbing. Tertiary education in India is at a crossroads, particularly since the creation of adjustment policies in 1990. In the current overall socio-economic context, it has been generally concluded that resources are declining and restricted. Government does not have enough funds, fiscal resources are also limited and tax revenues are relatively unresponsive, as a result, public resources for tertiary education will be restricted. It is debated that there are fiscal problems in India with the tax system being highly unresponsive to the needs of the economy. Although the government claims high economic growth over the last decade as a result of adjustment policies, with expanded level of capital inflow from multinational companies and bilateral and multilateral organizations raising the level of private endowments. On the other side of the coin, there is an indication that tertiary education will continue to be plunged into financial crisis. Hence the demand for mobilization of more private financial resources for tertiary education (Tilak 1997:7).

Although India is different from South Africa in population and in developments in science and technology, South Africa may learn from India as a developing country and as a fellow member of the Commonwealth. India and South Africa are facing similar problems, such as the expansion of the tertiary education system and declining financial resources.

2.6.2 Uncontrolled expansion

When the country gained independence in 1947, there were only 16 universities and 263 colleges. The increase is tenfold in universities and 22 fold in colleges. Student enrolment has also increased 22 fold (Harman 1991:112). But the percentage of students in the age group 17-
23 years studying in tertiary institutions is low, only 5 per cent against 50 per cent in Japan and 11 per cent in Britain.

2.6.3 Funding of tertiary education: current position

The overall expenditure on tertiary education in India rose from Rs176.8 million in 1950-1951 to Rs10 155.1 million in 1985-1986. Furthermore, the expenditure on technical education came to Rs3 074.6 million in 1985-1986, a larger portion of which was spent on tertiary education. Therefore, the overall expenditure on tertiary education in India was Rs13 229.6 million, which works out to 18.6 per cent of the total expenditure. The latest data on the sources of financing are for 1980-1981, which indicate that government financing rose from 68 per cent of the total in 1950-1951 to 85 per cent of the total.

Already the proportion of national earnings provided for education is high. It may be about 5 per cent. With the past pattern of expansion in the provision of public financing and given the fact that the provision of national income which can be allocated by the government for its use comes up against strict limitations, the result is fiscal crisis. The scope for any real expansion in the allocation of funds for education is very low.

As in many other countries around the world, there are other government priority sectors for which funds are urgently required. For example, agriculture, industry, transport, communications, power and defence. Furthermore there are other social services such as health, social welfare and nutrition which compete with education. Within the education sector, tertiary education does not have a high priority because India is still to achieve the national objective of universalization of elementary education for the age group 6-14 years and the elimination of adult illiteracy of the working masses between the ages of 15-35 years (Harman 1991:114). Taking all these facts into consideration, there is no doubt that funding for tertiary education in decades to come will increase very little and the tertiary education system needs to find ways of acquiring resources so as to minimise reliance on government financing (Harman 1991:115).
2.6.3.1 Increasing fees

Tuition fees of students in India includes a subsidy of Rs1 270 per student per annum. This amount is likely to be higher in some cases since some programmes are more expensive. According to a committee appointed by the University Grants Commission to determine fees to be charged for programmes in engineering and technology, the level would be required to be Rs8 000 per student per annum against Rs1 600 per student currently. The measures of raising fees should be considered together with the following supplementary measures:

- free places for students from poor backgrounds like scheduled castes and scheduled tribes and students below poverty status
- loan scholarship for middle-class students.

Any steps for raising resources and cost-efficiency for the financing of tertiary education have to form part of the general plan. This general plan would recognize that the private income of tertiary education is much higher than the income of return and thus the community would have to make a careful decision about tertiary education being sustainable, on the issue of revenue expenditure (Harman 1991:121). Thus, only those who can pay should pay and the poor gain free tertiary education. The identification process should be efficient in this system because there can be mistakes of assisting not the poor but the middle class whose parents are in a better position to pay for further studies.

2.6.4 The student loan programme in India

According to Varghese (1991:95) loans are aimed at offering students financial support to cope with expensive tertiary education. A scheme of loan scholarship of the national government has been running since 1963. Currently about 20 000 scholarships are given per year. The loan is repaid in instalments for 5-10 years. The Indian loan scheme is flexible. Student loans are not popular with the students because most of them come from poor families and do not want to start work with debt. There are also too many students. The government and the private sector cannot cope with the speed at which enrolments are increasing. Besides, the general feeling promoted by social customs has resulted in several problems such as:
• Indian society does not like the idea of loans. Students do not want to begin their career with a financial burden. Female graduates especially do not like an unpleasant "dowry".

• Private commercial institutions want security which the students do not have. Furthermore the credit market in India is not advanced enough to float student loans. Thus public contribution is required to provide assurance for giving loan scholarships to students.

• The rate of interest is also a significant matter. In many developed countries, student loans are given at lower rates or even interest free (Varghese 1991:95). The question is whether India's private financial institutions are ready for lower market rates of interest.

• Government intervention is necessary to regulate the administration of loan scholarships. This may lead to loans being funded and administered by the public authority.

• Unlike in the United States of America and the United Kingdom, the administration of loans in many developing states is difficult. In India, the absence of social security schemes means the financial burden of student loans will be excessively high on the state.

• As far as the question of repayment is concerned, many countries around the world are facing a difficult time. Extreme debt burdens and default rates have been common. As Hanseh (1989:62) points out, "student loan defaulters have become a major political issue in Washington in the past year because they now cost the federal government over US $1,5 billion annually". If this is the situation in the United States of America, where the administrative mechanisms to recover loans are said to be efficient, how can developing countries such as India expect to cope with this problem? The track record of India in the recovering of scholarship loans is not promising at all. The default rate is high because students cannot settle their accounts on time because of unemployment.

• If education does not guarantee jobs and if repayment is essential, people from poor backgrounds will be negatively affected. If loans are not properly regulated through policies regarding fees, this may encourage inequalities with participation of people from different classes.

The American experience supports this idea that rising dependence on loan financing has led to the stagnation of admission of minority groups in the 1980s (Hansen 1989:82). In the end, access to tertiary education in India may be severely reduced by the system of student loans (Varghese 1991:96).
2.6.4.1 Graduate tax

"A graduate tax is an education specific tax to be levied from those who use the educated manpower" (Varghese 1991:96). Manpower trained and educated by the education system is utilized by all economic sectors. These economic sectors do not directly finance education although they benefit in terms of productivity because of their employment of graduates. Hence it is believed that these employers should be requested to pay the expense of educating graduates in the form of an annual tax for every graduate they hire.

There is a move in India that favours a graduate tax. In India, the private and public sectors exist side by side. But the education system is generally financed by the government and the graduates produced are employed by the private sector. The benefits gained from employing graduates are for individual owners. Thus it is justifiable that the private sector should pay for human resources seeing as they benefit most from the government education system.

According to the principles of a graduate tax, the employer should pay an annual tax for every graduate they hire. The amount should be determined by the number of graduates employed and the duration of payment should be long enough to cover the expense of the education of the graduates. The rate of graduate tax should be determined by the type of education received by the graduate hired (Varghese 1991:97). For example, the graduate tax for engineering graduates employed will be higher than that for arts graduates. If the graduate tax is paid regularly it will ensure the sustainability of the tertiary education system.

One obvious problem with the graduate tax is that it might discourage employers from employing graduates. Employers may hire "cheaper" graduates (dropouts) or high school graduates. This could lead to more graduates being unemployed (Varghese 1991:97).

2.6.5 Successes and failures

Despite problems in the Indian tertiary education system there are some successes which indicate the hope that no matter what the problems, countries should strive to improve their tertiary education.
2.6.5.1 Diversification

The success of the Indian system is indicated by the diversification that occurred in Indian tertiary education. The pre-independence programmes were confined to traditional fields, such as literature, history, mathematics and philosophy. No everyday field was adequately covered. For example, most of the specializations in the sciences received little attention. The languages, social sciences and humanities were partially neglected. The level of programmes was confined. There was little research done and there was a small number of students at Masters or Doctoral level. In short, Indian tertiary education in the pre-independence era was meant to equip students to work for the British at the middle level. Those who desired to further their education had to leave India for Europe. Recently the situation has changed totally. The programmes provided for tertiary students in India range from all the traditional programmes to new programmes in agriculture, veterinary science, horticulture, the behavioural sciences, the social sciences, management, electronics, computer applications, demography, oceanography and the environmental sciences. Historic courses such as literature, languages, education, economics, medicine or nursing are provided in a differentiated manner (Chutnis 1993:23). The Indian tertiary institutions have also gained from their partnership with European and North American tertiary institutions, especially in the fields of technology, engineering, medicine and management.

2.6.5.2 Evidence of high quality

India currently is self-sustaining in tertiary education learning. Indians could study at home and qualify for high positions in government. Professionals educated at Indian universities can easily be hired in any of the developed countries around the world. Undergraduates and graduates form all over the world attend Indian tertiary institutions. Under British rule, agriculture was poor and served to supply Britain with raw materials and there was famine. India presently is self-sufficient in food production. She ranks third in the manpower pool in the world in the fields of science and technology and eleventh in industry. India's skills in medicine, engineering, computer software and research are world class. India's transport, health and communications have improved dramatically since independence. Many Indians hold important positions in industry and academic institutions around the world, giving India new international status (Chutnis 1993:25). These developments have been accompanied by over-enrolment and over-production of graduates created by India's inability to stop expansion.
2.6.5.3 Over-production of graduates

The developments in India since independence presents one side of the coin, the other side presents a negative picture. The excessive expansion of the education system in India, which one could praise, has also turned into a problem. The expansion has been quick and on a large scale. Tertiary education has been battling with a huge number of students demanding to be enrolled (Chutnis 1993:123). Unable to accommodate them in the desired fields of engineering and medicine, universities enrolled them in arts, science and commerce departments. The results were that the commerce faculty accommodated 21.5 per cent, the general science 19.7 per cent, engineering accounted for 4.6 per cent, agriculture accounted for 1.3 per cent while veterinary science accounted for 0.3 per cent. Education and medicine accounted for 3.6 and 2.3 per cent respectively of the total enrolment. The faculties of Arts, Science and Commerce were stretched to their limit. The results were large-scale unemployment and underemployment, while the lack of trained personnel in other fields increased because tertiary institutions produced too many arts, science and commerce graduates at great cost to the government. Other fields such as agriculture, horticulture, farming, fisheries, food processing, weaving, carpet-making, jewellery design, yoga, dance and music are neglected.

Graduates produced seem to be of poor equality. Employers complain that tertiary institution graduates do not perform according to the required standards. The complaints are not confined only to the arts, science and commerce fields, but also include other professional fields.

After more than 45 years of independence, Indian universities still fail to produce sufficient postgraduate students. More than 88 per cent of tertiary institution enrolments are undergraduates. Only 9.5 per cent is in the postgraduate programme and 1.5 per cent in the research programme. The fact is, the ability of a system of tertiary education to contribute to the upliftment of knowledge in a community is measured by the size of its enrolment in postgraduate and research programmes (Chutnis 1993:24).

There are also other problems such as leakage of examination papers, gaps between the syllabi and what is really taught in the lecture room. There is uncontrolled copying, very often mass copying at examination centres. Universities fail to conduct fair examinations and to announce or release results on time. In the process quality suffers and standards drop.
Teaching and learning in many Indian tertiary institutions have been relegated to examination-based activities and even the simple task of preparing students for examinations has been taken over by bazaar notes (cram notes and spot classes or coaching classes). There is a sharp division between universities that do the work and those who do not.

There are exceptions. The Indian Institute of Technology (IIT) and the Indian Institute of Management (IIM) do not suffer from the same shortcomings just described. They have been able to maintain admission standards, the quality of their syllabi, creativity in lecturing methods and their strict evaluation. But they account for only a small fraction (15 per cent) of the enrolment in tertiary institutions. The universities still do little research and fail to mature into centres of knowledge. Even at traditional universities such as Calcutta, Bombay and Madras research programmes are not encouraging because of over-enrolment and lack of academic staff. Only a handful of privileged funded by central government, barely managed to keep up their standards meaning that there are inequalities amongst tertiary institutions in India.

2.6.5.4 The inability to stop over-enrolment

Over-enrolment is the main concern and has caused many problems. Chutnis (1993:26) states that the present enrolment at Indian tertiary institutions is too high to control and manage effectively, especially due to the limited resources available for the administration of tertiary institutions. In 1950-51 the University of Bombay had only 23 affiliated institutions with a total of 22,608 students. Currently there are 214 colleges with 222,713 students. The expansion of the University of Calcutta is on an even larger scale. It is the biggest university in India with 238 affiliated colleges and 81 departments. Each year 1,2 million students enter for university examinations.

The expansion of universities has caused standards to decline. Universities should have stopped this expansion as soon as standards dropped but this was not the case. Despite calls from the University Grants Committee chairman, CD Deshmuth, in 1956, the central and state government refused to curb expansion, stating that it is against the national commitment to equality of educational opportunity (Chutnis 1993:24).
The Indian Institute of Technology (ITT) and the Indian Institute of Management (IIM) also came under pressure from powerful political parties who forced them to affiliate their colleges. In the name of equality of educational opportunity many institutions were forced to admit students even when there was no room to accommodate them or enough manpower to handle classes. "Reserved" enrolments for scheduled caste/tribal students make it an obligation for institutions to admit students from these minority communities even if their standard of performance is lower than that of students who compete for admission.

The IIT admission standard, evaluation method, syllabi and teaching methods were criticised by politicians who accused IIT of discrimination. The IIT was also criticised for using English as the only medium of instruction (Chutnis 1993:26). As a result, the IIT’s rigour and excellence was under serious threat.

2.6.6 Conclusion

The tertiary education system in India is one of the largest in the world. As in many developing countries there is an ever-increasing number of students while the financial resources are scarce. The government has many responsibilities to fulfil and so tertiary education receives less attention.

Student attendance of tertiary institutions was very low compared to Britain, Japan and the United States of America, therefore India, like South Africa today, wanted to increase access to tertiary education, so it introduced special fees and colleges for the poor. This was good in theory but the results were disastrous because most of the graduates studied in the field of the humanities and there was an over-production of graduates who could not find jobs. Apart from this, the expansion of student enrolment was not accompanied by an increase in lecturing staff. Lecturers, over-burdened by work, resorted to teaching for examinations which led to copying and leakages of question papers.

Tertiary institutions in India have attracted few donors or sponsors. For many years their main source of finance has been the government. The function of the University Grants Council (UGC) was to be a buffer organization between the government and tertiary institutions. The institutions spend money and they had to claim later, that is, the institution had to foot the bill
before funding from UGC arrived. This wasted time and favoured bigger universities and there was unequal distribution of funds.

Another fact that needs attention in the Indian tertiary education system is the role of the UGC in the running of the institutions. Most of the activities that involved money had to be approved by the UGC which means that the autonomy of the institution was undermined or threatened. As a result many universities were driven by donors or the government rather than the management of these institutions.

India departed from producing graduates in the humanities by establishing private institutions such as Kerola and Maharashtra universities, but these institutions were not properly registered ("fly by night"), were expensive and controlled by politicians. These colleges offered engineering and medical programmes. Although these institutions were called private, they were funded by the government, either directly or indirectly. The academic standard at these institutions was unsatisfactory. Though these colleges addressed the lack of science, engineering and medical students in India many employers complained about graduates, their lack of efficiency and effectiveness in their fields. There were many graduates in India but there was little postgraduate research. Student loans in India have not been successful because many students do not want to start work by being in debt; poor students do not have security to secure a loan from banks and many Indian communities do not like lending money.

South Africa can learn from the failures and successes of India. The Indian tertiary education system has been successful in reaching the poor. Science subjects or programmes were successfully introduced and many Indians around the world now occupy key positions in companies, organizations and industries. The Indian Institute of Technology and the Indian Institute of Management have quality and standards, but admit a very small number of students. These institutions are heavily criticised by politicians for discrimination and lack of transformation because of their high requirements. Eventually they were forced to lower their standard to admit poor students. As a result they became like many institutions around the world who are forced by the government to admit more students even with a shortage of academic staff and declining resources.
SECTION C: UNDERDEVELOPED COUNTRIES

2.7 Financing tertiary education in African countries

2.7.1 Introduction

Many countries in Africa are facing common financial problems in their tertiary education systems. As in many other countries around the world, in Africa there is uncontrolled expansion, dwindling budgets, shrinking economies, political instability, managerial problems and a drop in the standard of tertiary education. Most African countries fall into the category of underdeveloped countries (Maliyamkono 1991:351). Africa will be studied as a whole rather than as individual countries, with the exception of South Africa, which will be the subject of Chapter 3.

The true situation in Africa is described by Hoffman (1996:83) as being at threshold between her hopeless characterization of death, despair and a boom. Those consultants and activists who view a silver lining of democracy and economic freedom behind every African cloud are hoping for a better Africa. Africa is saddled with debt, devastated by war, plagued by drought, famine, disease and other natural disasters. Africa is facing a host of serious problems in the next century. Her natural resources are exploited with little consideration for the environment; her infrastructure requires redevelopment or renewal and her institutions and civil society require revitalization.

In the tertiary education sector, there are mixed signals. Progress is visible but there is still room for improvement. After independence many African countries regarded tertiary education as the foundation on which economic and political revival should occur. Countries such as Senegal, Tanzania, Uganda, Mozambique and Nigeria regarded indigenous universities as the producers of national progress and development and provided greater amounts of economic and human resources to projects that indicated the priority of the university in the newly independent nation (Hoffman 1996:83).

Currently, tertiary education in Africa is in crisis. Post-colonial institutions of tertiary education are young and underdeveloped by world standards. Against a background of political and economic transformation facing many African countries, tertiary education has played second
fiddle. And yet it is the tertiary education problem which indicates, maybe, the most critical long-term damage to Africa's economic revitalization. Generally, experts contend that in the long term, Africa can scrape through only by fully developing its human resources, particularly the skills and knowledge acquired in tertiary education.

As Africa moves steadily and enthusiastically towards a market orientated macro-economic system and multi-party democracy, there is still a shortage of African professionals in this important sector because of underdeveloped tertiary education. In addition many African graduates leave Africa for Europe and the United States, thus aggravating the situation.

After independence many African states could not claim to have 100 college graduates; for instance, Zaire had only 16, Burundi had none. Currently there are over 100 colleges, universities and other tertiary institutions serving over 500 million students in 54 African states. This is a vast increase since the early 1960s when Africa had only six universities (Hoffman 1996:83). According to the World Bank report, African tertiary institutions have been largely effective in undertaking their initial duty of "transforming themselves into legitimate national institutions of higher learning" (Hoffman 1996:84). Africa still faces many problems, including declining resources and increasing enrolment.

2.7.2 Problems facing tertiary education

2.7.2.1 Expanding enrolment and declining resources

African universities in general trail far behind the university system in other parts of the world particularly in the west. In every important category, Africa has the lowest percentage of university enrolment in the world, only 2 per cent. The United States of America has 5 591 universities per 100 000 residents and Cuba 2 461. Tanzania has 21 university students per 100 000 people and Mozambique has only 16 per 100 000.

These figures are especially deceiving because from 1980 to 1990, enrolment in African universities grew by 61 per cent, from 337 000 to 542 000. In 1990 only 15 states in Sub-Saharan Africa could claim more than two universities. In Angola, for example, despite 17 years of civil war, enrolment grew from 2 200 to 6 000 for the period 1980-90; in Somalia from 2 900 to 15 000 and in Nigeria from 70 000 to 161 000.
Many students still come from upper- and middle-class income backgrounds and are able to pay the increasing cost of tertiary education. The crisis is far from abating because tertiary education receives little attention from the government. During the 1960s African governments provided 100 per cent of the financing for tertiary education courses, currently they provide 88 per cent or less of such financing. The percentage of financing in governmental budgets for tertiary education courses decreased by 19 per cent in the early 1980s to 15 percent after ten years. Cash-strapped states facing declining economic growth and persistent inflation are not able to subsidize education in the manner they once did. The combination of expanded enrolment and a decline in government financing during the last ten years has resulted in circumstances in which many of Africa’s tertiary institutions are overcrowded and unable to address the increasing demand for increased access. For instance, in Côte d’Ivoire 50 000 students are enrolled at the university of Abidjan, a university initially established for 6 000 in 1963 (Hoffman 1996:84-85).

In Cameroon’s University of Yaounde 45 000 students are crammed into an institution designed for 5 000 students. The University of Ghana has closed four times recently because of overcrowding (Hoffman 1996:84; Hodges 1994:8). Historically, African universities have adopted a social welfare model consisting of housing, health care, subsidized meals and tuition at little or no expense to individual students. The World Bank reports that Anglophone African countries spend between 12 and 15 per cent of their tertiary education budget on auxiliary services, while Francophone states provide approximately 55 per cent of their tertiary education allocation to keep students in tertiary education. This well-intentioned system came as a relief to many African students, considering their economic situation, but this had a detrimental effect on other services such as housing, health care and tuition. Many students delayed their progress at universities to take advantage of the benefit of the government subsidies. Many students supported their families from these grants (Hoffman 1996:85).

Owing to their poor financial situation, many African universities cannot pay their professional and auxiliary staff adequately and maintain the integrity of their academics. Most professors are obliged to supplement their salaries by performing odd jobs such as taxi driving (Hoffman 1996:85; Hodges 1994:8; Maliyamkono 1991:353).

"Attracting and retaining well-qualified teaching staff and researchers now poses the most serious problem for African universities. The main reason is the unacceptably low purchasing power of staff salaries. Real wages fell by 30 per cent between
1980 and 1986, with salaries at the highest grades falling the fastest. In 1991 a lecturer's salary in Uganda was just $19 a month, barely enough to buy a week's worth of food. In Ghana, a faculty member's annual income is the same as the cost of a new refrigerator. Many teachers have left and relocated to other countries like South Africa, where they can multiply their income tenfold" (Hodges 1994:8).

This has resulted in African universities being unable to attract qualified and leading professionals; for example, after independence African tertiary education had two jewels in her crown: Makerere University in Uganda and the University of Dakar in Senegal. Now they are pale shadows of their former selves. Their physical facilities deteriorated and the quality of instruction is dramatically threatened as a result of political and economic turbulence, combined with acute underfunding and misappropriation of funds. Makerere has 94 per cent of all university enrolments in Uganda and lecture halls are overcrowded. The University of Dakar, designed to house 3 500, housed 20 000 in 1991. Physical infrastructure deteriorated due to a lack of resources and proper maintenance. The library, once the biggest in the area, is showing discouraging signs of neglect. Its air-conditioning system broke down in 1980 and no repair was made, jeopardizing the book collection. The University of Dakar spent most of its funds on medicines for students and their families, totally neglecting the library and other facilities, which is totally unacceptable (Hodges 1994:8; Maliyamkono 1991:353).

In many African countries, the research function has been seriously delayed, if not totally stopped. Africa in general contributes only 0.2 per cent of world research. Data from the African Academy of Sciences, indicates that Africa spends only 1 per cent of its gross national product (GNP) on research compared to 20 per cent in the west.

2.7.2.2 Brain drain

African universities are experiencing a serious "brain drain" among the intelligentsia. Critics estimate that the figure of African students studying overseas at 200 000 (Hoffman 1996:85). This is 15 per cent of Africa's total tertiary education population. The World Bank reports that approximately 23 000 academics emigrate from Africa yearly. Over 30 per cent of Africa's skilled professionals stay overseas. About 70 000 Africans remain in Europe after training. Over 10 000 Nigerians have remained in the United States. At a stage, the centre of Islamic studies in Sudan lost two thirds of its professionals to overseas countries. A 34 per cent
vacancy rate was reported in Zimbabwean Universities in 1992. Forty eight per cent of staff posts in Makerere University, Uganda, are vacant. This crisis needs to be addressed if Africa wants to make any noticeable impact on the world economy. This brain drain is due to a lack of limited employment opportunities in Africa.

This presents a sad picture for the African tertiary education system because they need human resources to develop. Some countries have embarked on structural adjustments that minimize the requirements for high-level skilled professionals; for example, in Burkina Faso, there is an annual national university pool of 1000 graduates which consist of lawyers, economists and journalists who cannot be accommodated in the national job market (Hoffman 1996:86). The brain drain can be stopped firstly by the creation of political stability and economic prosperity. Political stability is of vital importance because many intellectuals are victimized by African governments for speaking out about corruption and other malpractices in their countries. Democratic governments will create a suitable climate for economic prosperity and efficient and an effective tertiary education system.

2.7.2.3 Lack of non-governmental sources of finance

Many African states will enter the next century unprepared to compete in the world economy unless drastic changes are made. In many countries overwhelming student activism and weak governments have stopped the introduction of seriously required reforms (Hodges 1994:8).

At the same time financial constraints are rising. Social and economic pressures to increase enrolment can also be anticipated to continue from the side of social demand. The quick expansion of secondary schooling, which has resulted in a rise in the enrolment figures from 3 per cent in 1960 to 15 per cent in 1994, has led to a rise in the number of the youth both willing and qualified to further their education at tertiary institutions.

Because many African governments cannot cope with the rapid expansion of enrolments, non-government sources of finance are needed. These could include the introduction of private universities for students who can pay for their studies, so that the government can put more money into public tertiary institutions where poor students can be accommodated (Hinchliffe 1985:63). Most African tertiary institutions have attracted very few private donors from overseas. In many cases the donors cannot cope with the huge responsibility of funding
primary, secondary and tertiary education. In the end, primary and secondary education are preferred to tertiary education. The latter is regarded in many circles as a luxury. There is also a lack of privately owned institutions in Africa. They are very few, mainly run by churches. There are two reasons for the lack of privately owned and managed institutions. Firstly, the idea inherited from colonial powers that tertiary education is the responsibility of the government while the church takes care of primary and secondary schooling. Secondly, the problem of finance; tertiary education in Africa is very costly to provide. With the public sector providing free education, the chances are limited for paying for education to take root, unless loan mechanisms are introduced (Hinchliffe 1985:67). African students face difficult times in the coming millennium.

The private sector could contribute to the expense of tertiary education in several ways other than taxation. Firstly, large firms could be encouraged to aid faculties from which they recruit graduates. Secondly, firms might provide high-level training to students. An example of this exercise is the multinational mining companies in Liberia. More open schemes could be the provision of bursaries and scholarships to augment government subsidies (Hinchliffe 1985:67). Another area in which funds could be generated is in research contracts, but there is little research in Africa.

Even though the private sector is strong and most new students attend private colleges, public institutions will continue to educate the majority of students. Public institutions need to generate more funds from the private sector. Firstly, students should share the cost of tertiary education. Secondly, they can be charged tuition fees. Non-educational subsidies for meals and housing can be eliminated. Thirdly, tertiary institutions could also generate private funding through contributions, endowments from alumni and the private industry. Fourthly, public institutions can increase their funds by mobilizing their own funds through short vocational courses and consultancy. An important component to cost sharing is providing financial aid to poor students. This can be done through a loan system as in the United States of America, Australia and Britain (Hodges 1994:8).

With declining resources from governments and with western governments insisting that tertiary education become market orientated. Before getting deeper into the dispute for or against such user cost schemes and their viability, a brief survey of the present financial packages for students in tertiary education in 24 African states follows (Hinchliffe 1987:99).
Uganda
No tuition fees are paid and each student is provided with 4 800 shillings annually as pocket money.

Somalia
All educational tuition expenses plus food and accommodation costs are funded by the government (Hinchliffe 1987:102).

Botswana
The tertiary institutions charge fees for tuition and for room and board. Bursaries to cover these costs and the purchase of books and supplies as well as pocket money are available to all who apply. After graduation the former students are bonded to the government for a duration equal to the period of their programme of study plus one year and then repay 5 per cent of their salary yearly during that period. Students who study overseas are bound by the same requirements in their bursaries.

Burkina Faso (Upper Volta)
Free tuition is available and students at the University of Ouagadougou get pocket money or personal allowance. Scholarships for secondary and tertiary education form 35 per cent of the total educational costs.

Burundi
Tuition is free. Between 1977 and 1979, the total value of government grants for accommodation costs increased fourfold.

Cameroon
Only half of all students get scholarships and a lack of finance causes a high rate of student dropouts. In the professional institutes all students get scholarships. Tuition is free.

Ethiopia
Part-time students who attend evening classes pay fees. Full-time students do not pay. No grants or scholarships are offered/available.
Ghana
This state is one of the few to have initiated a comprehensive loan scheme for students. It started in 1971 but was abolished in 1992. The loans were to pay for food and accommodation plus a personal allowance. In 1975, the National Consultative Committee on educational finance proposed the reinstatement of loans but this did not happen. In March 1984 the National Education Commission reiterated their proposed loan package for maintenance and a personal allowance. Currently, tuition, accommodation and two meals a day are free and each student gets a book allowance of 900 cedis (US$10). A two-year period of national service is required from each former student of both sexes.

Ivory Coast
In 1985, the government changed its policy of permitting all students who passed secondary school to enrol at university and providing them with scholarships. Out of 3 300 students enrolled at the University of Abidjan, 2 500 received scholarships based on their academic record, their family's financial condition and their field of study.

Kenya
Loans to cover accommodation are in place and were introduced in 1974. Sh21 million (US$1.5 million) have been loaned since then but in 1981, while Sh540 025 were owed for repayment, only Sh99 408 were collected. According to Woodhall (1983) an attempt in 1981 by the state to initiate a clause making parental land collateral for student loans, caused demonstrations and was stopped. Of all Kenyans studying overseas and locally, 90 per cent are paying their tuition expenses and living costs (Hinchliffe 1987:100-101).

Lesotho
About 86 per cent of students get loans of Mf 081 (US$1 178) annually, one third of which is paid directly to the university as a portion of tuition fees (expenses) and accommodation. The current arrangement is for the loan to be repaid in equal annual instalments within a five-year period with a 50 per cent discount if former students work for the government. But the loan collection measures are not efficient. Though the scheme has been running since 1977, and total loans in 1983-84 were M1.4 million, only about M10 000 annually is presently being collected.
**Malawi**

All students receive allowances of K215 annually (US$172) and accommodation and tuition are free. The allowance constitutes 6.2 per cent of the university’s budget. Boarding expenses per student is K312 and constitutes 8.5 per cent of the university’s total recurrent expenses. The government intends charging for accommodation in the future.

**Mali**

In the past, secondary and tertiary education scholarships covered 43 per cent of the total education budget. Any change in the status quo was met with strong opposition from the students. Changes to the eligibility criteria for foreign scholarships caused a fall in scholarships to 29 per cent of the education budget in 1981 and the total for local scholarships remained at the 1978 level.

**Niger**

In the 1970s, the federal government dropped non-federal universities from the federal budget and put them under the control of state governments. As a result, universities are increasing their earnings by the introduction of fees for lodging and food (N468 annually) and charging fees for non-degree courses and postgraduate study. Graduates serve in the national service for a certain period as a repayment to their debt accumulated during their studies (Hinchliffe 1987:101).

**Senegal**

Education is free.

**Sierra Leone**

Universities charge tuition fees but these are funded by central government scholarships and by aid from the private sector. By 1985, accommodation fees were increased and food subsidies dropped.

**Sudan**

Accommodation and tuition are free. From 1976 to 1977 students’ personal allowance totalled more than book costs in Khartoum University and students’ welfare expenditure was 17.4 per cent of the university’s budget.
Swaziland
All students or pupils have to pay for their education. The average government scholarship was £540 while fees, charges and living costs at universities in 1976 have been estimated at £680. For scholarships the repayment period is two years.

Tanzania
The loan scheme was introduced in the early 1970s but was abandoned because of the high cost of administration and the perceived injustice of the scheme. Loans were repaid by working for the government for five years. Students received free tuition and got Sh500 (US$25) monthly plus yearly book allowances of between Sh1 000 and 3 000 according to the faculty. In 1982, the national commission of education proposed the re-establishment of a loan scheme but nothing has come of this.

Zambia
All allowances are paid to students while tuition, food and accommodation are provided free of charge at the university.


From the above survey several points emerge. Firstly, despite unsuccessful attempts in Swaziland and Lesotho, no government presently has a general policy of charging even a portion of tuition fees which are not then covered by some form of grant. Secondly, many governments pay most of the boarding and lodging costs for students (Hinchliffe 1987:102-103). Thirdly, most governments give allowances for other living costs.

2.7.3 Donor contributions in African universities

Most African universities have been struggling with huge decreases in available funds since the mid 1980s. External donor aid, after declining through the 1980s, has stabilized and is expected to increase. However, due to the loss of government funds for vital functions, donor aid has taken on a substantial overall importance and is more needed for important functions such as teaching staff and development of infrastructure. External aid in most cases is donor-
driven rather than need-driven (Wield 1997:41). As a result, the autonomy of tertiary institutions is undermined.

Donors have been subjected to increasing pressure to aid long-term and core functions such as building maintenance, staff salaries and libraries. Each donor has a different policy, ending up in a host of different university donor management packages.

2.7.3.1 University of Dar Es Salaam (UDSM)

The University of Dar Es Salaam (UDSM) ran into resource constraints in the 1980s. Well-trained academic staff (the majority being Tanzanian) started to leave as individual and institutional structure conditions quickly deteriorated. A turbulent wave of fragmentation of academic life persisted, academic autonomy disappeared and many senior Tanzanian staff left tertiary institutions to work locally and abroad. As fragmentation increased, the budget encountered further constraints and senior staff's academic survival relied on creating some independent activity, inside and beyond university fences (Wield 1997:48). This led to the collapse of order and control in the university.

During the 1980s donor aid expanded with programmes aimed at the training of civil servants. However, core government financing continued to decline. Government aid to the university was not enough for the sustainability of the University of Dar Es Salaam.

Table 2 illustrates the budget for the period from 1985 to 1994. In general the table indicates the crisis of core financing from the mid 1980s. The institution believes that its requests are a manifestation of the real needs of the university (Wield 1997:44). But the government believed that what is requested is too much and cut the requested budget.
Table 2: Budget of UDSM

<table>
<thead>
<tr>
<th>Year</th>
<th>Requested Budget</th>
<th>Actual Budget</th>
<th>% of Request</th>
<th>$US m equivalent</th>
<th>Exchange Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>1985/86</td>
<td>419</td>
<td>326</td>
<td>7,8896166e+17</td>
<td>19,2</td>
<td>1,528413e+20</td>
</tr>
<tr>
<td>1986/87</td>
<td>503</td>
<td>446</td>
<td>1,69664e+16</td>
<td>4,4</td>
<td>4,703146e+19</td>
</tr>
<tr>
<td>1987/88</td>
<td>822</td>
<td>501</td>
<td>1,89664e+16</td>
<td>4,7</td>
<td>4,703146e+19</td>
</tr>
<tr>
<td>1988/89</td>
<td>1 235</td>
<td>801</td>
<td>1,49664e+16</td>
<td>3,9</td>
<td>3,999736e+19</td>
</tr>
<tr>
<td>1989/90</td>
<td>2 418</td>
<td>1 303</td>
<td>1,25964e+16</td>
<td>3,2</td>
<td>3,29936e+19</td>
</tr>
<tr>
<td>1990/91</td>
<td>4 802</td>
<td>2 004</td>
<td>1,56264e+16</td>
<td>4,1</td>
<td>4,199928e+19</td>
</tr>
<tr>
<td>1991/92</td>
<td>6 647</td>
<td>3 386</td>
<td>1,47764e+16</td>
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<tr>
<td>1992/93</td>
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<td>3 296</td>
<td>1,26464e+16</td>
<td>3,2</td>
<td>3,29936e+19</td>
</tr>
<tr>
<td>1993/94*</td>
<td>8 000</td>
<td>2 900</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

* Estimate - In 1993/94 the budget excludes some new direct grants to students. The change is to give students responsibility for buying food, books, etc. These grants will probably amount to 1,3 billion shillings, making the total to compare with 1992/93 4,3 billion shillings.

(Source: UDSM Bursar's Office)

2.7.3.2 Eduardo Mondlane University

The university presently has 21 five-year bachelor's degree with dissertation programmes and a seven-year course in medicine. There were 3 482 students in 1992-93, an increase from 2 034 in 1985, and 312 full-time academic staff in 1993, it is the largest tertiary institution in Mozambique.

This university was built during the 1960s and the conditions of such buildings are deteriorating. Much of the laboratory equipment is old. The expansion of student enrolment has resulted in overcrowding and pressure on old and irregularly maintained facilities. The limited residential facilities make it impossible to enrol students outside Maputo, leading to restricted access to tertiary education. Even after a period of human resource development only 5 per cent of graduates have doctorates and 75 per cent have a basic BA degree. Research output is also extremely low.
African tertiary institutions attract very few contracts from donors because of their very low research output. To attract more donors, African states should eliminate conflict and dictatorship and produce governments that are stable and recognized by the international community.

2.7.4 Level of donor aid in Africa

The rate of donor aid has been increasing quickly, so that outside aid is the key to daily financing in these two universities. But estimating the size of such aid is difficult; firstly, the institutions have in place financial systems that mirror the traditional role of government as the dominant financier and donor aid as supplementary. Secondly, much of outside aid is not transferred to university budgets but rather is provided straight from donor or executive agencies to specific faculties, individual academics and departments (Wield 1997:45). Reliable estimates reveal that outside donations to Eduardo Mondlane University represented about two-thirds of the overall running costs in 1992, and that 40 per cent of the finance for the University of Dar Es Salaam came from outside donors. The most outside aid comes from bilateral and multilateral donors. At the University of Dar Es Salaam, academics and administrators distrusted each other, the former accusing the latter of being puppets of the government. The result was “everyone for himself” and consequently donors aided departments or individuals rather than the university (Wield 1997:46).

Eduardo Mondlane University has traditionally been more centralized and has been getting expanded donor assistance in recent years as part of the transformation process. One main aim of the transformation plan has been to expand the amount of flexible institutional assistance and to encourage inter-university co-ordination that is multipurpose, for example, human resource development, faculty institutional development and integrated research. Eduardo Mondlane University has been successful in winning some flexible university-wide aid for existing budgets and endowments, including greater assistance for new buildings and refurbishing existing buildings, administrative restructuring and reinforcing of academic management.

Most donor activities are the same in both universities. Much aid has involved long-term relationships with the institutions. At Eduardo Mondlane University (UEM), assistance from the Netherlands government has persisted since 1976 and Swedish aid from the Swedish Agency
for Research Cooperation with developing countries (SAREC) has increased steadily since 1978. At the University of Dar Es Salaam, aid from the German Government Agency (GTZ), for the engineering faculty has continued since 1971 and the Netherlands Government Agency (NORAD) has aided chemistry and chemical engineering for the past twelve years.

Most funds received from donors are not managed at the institutions. At the University of Dar Es Salaam, almost all outside funds are not managed by the university and until recently the university had an uncertain picture of the amount donated. Outside financed projects keep their finance away from the university, preferring that the funds stay in the donor state and that allocation be administered there. The only faculty that keeps the funds locally is that of engineering.

At Eduardo Mondlane, since the institutional transformation plan started, more support has been put into funding local management so that funds from the governments of Norway and Sweden, the World Bank and many charity organizations are locally managed as well as money from the local government. But still the bulk of funds is not under the direct control of the university. In 1991 the institutions managed only 16 per cent. This percentage increased to 28 per cent in 1992.

The universities' inability to control funds directly hampers the development of allocation capability within the institutions and the establishment of relations with local and regional suppliers. Universities only guess at the value of aid because agencies do not reveal the actual amount.

At Eduardo Mondlane, as donor aid has increased, so the diversity and proliferation of reporting systems has become a critical problem because it acted as the main constraint on the university management system. The Rector suggested that his university and other African tertiary institutions should improve their capacity to plan strategically and that donors should assist them (Wield 1997:48-49).

2.7.5 Conclusion

Africa's history in tertiary education is one of alternating despair and hope. Despair because many countries are unable to put tertiary education on a sound footing due to lack of funds and
the World Bank and other donors believe that tertiary education, especially in the developing countries, is a luxury. The World Bank and many governments in Africa are more concerned with primary education and adult literacy.

With the end of the Cold War and the emergence of democracy in Africa, there is hope that order and political stability will be achieved in Africa. The latter is a prerequisite for good tertiary education. Without order, stability and peace there is no foundation for quality tertiary education. None of the above can be found in Africa. Africa is still dominated by governments who believe that tertiary education is a threat to their rule, therefore they do not need it.

But the economic implications for Africa are based on tertiary education providing skilled labour, which Africa urgently requires, before the next millennium. Most of the élite tertiary institutions that Africa inherited from its colonial masters are in disarray and ageing. Most need to be rebuilt or renovated. Uncontrolled expansion of student numbers has also turned the problem into a crisis.

The standard of education in tertiary institutions has dropped dramatically because of over-enrolment and the brain drain experienced by most tertiary institutions in Africa. Most of the academics remain in Europe or flock to South Africa for a better quality of life because of lack of funds and opportunities in their own countries.

Private donors in Africa are confined to relief aid or supporting basic education. Research in Africa is still a dream therefore there are, as yet, no contracts with companies. Many governments in Africa are the main provider of funds for tertiary education, which erodes the autonomy of tertiary institutions. As a result, politicians, like those in India, exploit tertiary institutions for their own political ends.

The one lesson South Africa should learn from the rest of Africa is that it should not repeat the mistakes of Africa and fall into the same traps. Africa needs thorough planning of her tertiary education system above everything else. Without planning, money alone can not solve all the problems.
2.8 Summary

There are many points that one can mention concerning African countries, some are unique, others are general. Firstly, the line of demarcation between the developed countries and the developing countries is clear. Those countries belonging to the first world cope far better with financial problems than countries from the third world. This highlights the fact that the bottom line is the economy of the country. Countries with better economies will fare better in developing their tertiary education systems. The picture in Africa is not pleasing at all.

Another factor in determining the success of a country's tertiary education is its political stability. In this area Africa is also not doing well. At the moment there is still much instability on the continent and governments do not seem to care about tertiary education. The World Bank is not helping either because its priorities are adult literacy and primary education and funds do not reach tertiary education. Many states in Africa regard tertiary education as a source of conflict because of the criticism they receive from researchers and students in tertiary institutions. The sustainability of loan schemes for students needs attention because in the quest to increase access to tertiary education, many will drop out because they cannot secure security for commercial bank loans or are unwilling to start their careers in debt. Many are still left out of the system.

The learning alliances between tertiary education and industry or the private sector prominent in the United States of America and Britain, are non-existent in Africa and the developing world. Except for South Africa, there are no visible signs of development in research amongst African states. Because of a lack of funds, the state of basic facilities in tertiary institutions has deteriorated dramatically. The old colonial tertiary institutions need to renovate existing buildings and expand their facilities. The number of students are swelling in African tertiary education institutions, many of which were originally designed to accommodate smaller numbers but are now overcrowded.

Many developed countries such as Norway, Sweden and the United States of America as well as organizations such as the World Bank are trying hard to aid Africa financially but the task is enormous. There are many problems in Africa: wars, famine, large numbers of refugees, corruption and dictatorships. With the dawn of a new democracy and the end of the Cold War there is still hope for Africa.
In Chapter Three, the South African tertiary education system will be discussed. South Africa, with the infrastructure and economy of the developed world in a third world continent, raises very interesting questions. With the new education dispensation and the legacy of racial division in education, it will be interesting to see how South Africa will fare in the face of these challenges.
CHAPTER 3

FINANCING TERTIARY EDUCATION IN SOUTH AFRICA
3.1 Introduction

For decades the tertiary education community in South African has been aware of the increasing financial crisis in tertiary education. More and more prospective students are prevented from entering tertiary institutions simply because they are unable to pay. Although this does not apply exclusively to black students, it is clear that it is black students per se, who are left out of tertiary institutions for financial reasons (Jackson 1994:7).

There are widespread class boycotts and disturbances in tertiary institutions that lead to possible failure and loss of study time. Parents also worry about loss of money (Mfikoe 1998:15). Damage to property amounted to R4 million and about 100 days were lost between July 1996 and July 1997 according to statistics in the Readers Digest (City Press 1998:17 and Mittner 1997:10). At Usizo Technical College in Kwa-Zulu Natal the principal's car was set alight and a police vehicle was damaged following disturbances at the college (Fuphe 1998:6).

Tertiary education in South Africa is racially skewed. In 1994, 2 out of 1 000 blacks attended tertiary institutions while 31 out of 1000 white South Africans attended tertiary institutions. The main stumbling block was apartheid, but currently poverty is the main obstacle preventing the majority of blacks from attending tertiary institutions (Jackson 1994:7).

To make matters worse, the government introduced subsidy cuts to tertiary institutions. This is not unique to South Africa. It is a common trend around the world. Many governments cut subsidies for tertiary education to be able to spend more on other social responsibilities. These subsidy cuts have caused serious financial problems for students and institutions alike. Student debt is increasing rapidly and many tertiary institutions in South Africa are facing closure if funds are not recovered from students (Jackson 1994:7). The cut in subsidies without considering the differences in the past, is worrying and is detrimental to the development of historically black institutions. Equal cuts will see historically white institutions developing more than the historically black institutions. This will maintain inequalities between the historically white institutions and the historically black institutions (Mokae 1998:21 and Donaldson 1994:5).

Tertiary institutions face two main financial challenges. Firstly, they are required to ensure enough access, especially for blacks. Secondly, they are required to maintain and develop the quality in undergraduate and postgraduate teaching and research. Without research there can be no substantial human resource development (Saunders 1992:38 and Collins 1997:26).
Another problem facing tertiary institutions is over-enrolment and over-production of graduates who cannot be absorbed by the job market. Many countries in Sub-Saharan Africa have enrolled above their capacity and South African tertiary institutions are heading in the same direction. Already, South Africa is faced with large numbers of graduates who are unemployed (Saunders 1992:38 and Graduate 1998:17).

The financial problems in tertiary education have led to conflict and tensions on campuses around the country which have resulted in the destruction of property and loss of valuable study time together with financial implications, because the property had to be repaired. These conflicts indicate the seriousness of the problem in tertiary education and the need to address them as soon as possible. If the problem in tertiary education is indeed financial and the state of government pours millions of rands into tertiary education, will the problems go away? According to Coombs (in Roos 1992:4),

"Organised educational systems do not run on slogans and good intentions. They run on money, but not all the problems of education can be solved by throwing money at them. Without the money to secure the essential physical resources of education (buildings, equipment, materials and supplies) and the human resources (teachers, administrators and custodians), organised educational systems would collapse onto an empty center. With money, the non-financial problems of education become more tractable."

It is clear that all the problems facing education cannot be solved by providing them with money only. Several other factors such as legislation play a role, but even the non-financial challenges of education are more likely to be run successfully if there are sufficient funds available. These two observations are relevant to the tertiary education debate currently taking place in South Africa. Firstly, it is of significance that those involved in tertiary education realize that allocation of huge amounts of money will not solve some of the fundamental problems facing tertiary education in this country. Secondly, if tertiary institutions do not succeed in providing extra money to tertiary education, recycling as much of the funds as possible and in spending the funds more effectively, they will surely not satisfy the many legitimate claims in South Africa for equal education. To be unsuccessful in doing this will almost certainly prevent many institutions from resolving the many other non-financial challenges.
The tertiary education community (state, students, donors and parents) should agree on two points, namely that the state, the private sector, former students and parents are the ones who gain from tertiary education and that tertiary education should compete with other social services for resources. All these components should strive to improve the efficiency and effectiveness of education expenditure, restrict enrolments, reduce the costs of different budget components and identify other sources of income besides students and government.

3.2 The government and tertiary education

The problem regarding tertiary education is that the general public in South Africa regard it as a luxury. The view that tertiary education is for the rich is also shared by many governments and organizations like the World Bank, therefore less is spent on tertiary education than school education as mentioned earlier.

The relationship between the state and tertiary institutions is based on the funding of tertiary education in order to stimulate economic development which will enable the country to be competitive internationally (Atwell 1991:40). The main determining factor in the relationship between the state and tertiary institutions is the availability of funds (Alberts 1991:145). The state in many cases pays 70 per cent of the operating costs of universities. The students and the private sector have to make up the remaining costs. With the present subsidy cuts, students from low-income backgrounds will find it hard to cope with rising costs. Thus voluntary donations are necessary to ease the burden of rising costs (Alberts 1991:146 and Atwell 1991:43).

Tertiary education enjoys a great deal of autonomy, but the state also plays a major role in determining the standard of tertiary education. For example, the state regulates and establishes the funding mechanisms which create a climate conducive to the development of tertiary institutions (Alberts 1991:146). But, a tertiary institution's total dependence on the state for funds reduces the autonomy of that institution, which could result in the institution being driven by the state rather than by its own needs and objectives (Alberts 1991:146 and Atwell 1991:43). Tertiary institutions should raise their own funds. For example, the University of Venda (Univen) has raised R91 600 to aid students (Mamaila 1998:7).
With the new political changes in South Africa, tertiary education also needs to change. New priorities should be established and objectives should be underlined in order to accommodate these changes. In general, tertiary education should be transformed to enable the masses to attend these institutions of higher education and jobs should be made available for them after graduation. If not, tertiary institutions will be promoting unemployment.

In the context of financing tertiary education, the budget process should be seen as the allocation of funds and should not be used as an instrument of enforcing terms or laws on the institution by the government. For this reason the allocation of funds should be a financial exercise that starts and ends with the tertiary education system receiving adequate funds without strict conditions. This means that the autonomy of institutions should be preserved (Alberts 1991:2). Furthermore tertiary institutions should manage their finances efficiently, effectively and accountably.

On the other hand the budget process should be seen as part of the tertiary institution’s integrated system of planning and control. This will ensure that the basic functions of tertiary management are employed. The primary function of the budget is to bridge the gap between the objectives of tertiary institutions and state priorities (Alberts 1991:2).

On the matter of the financing of tertiary education and the place it occupies in the national budget of different countries around the world, Etheridge (1982:7) argues that tertiary education is one sector in the national budget that has expanded rapidly. Most developing countries spend between 5 per cent and 7 per cent% of their gross national product on tertiary education. In developed countries about 20% of the gross national product is spent on tertiary education. More is spent on primary and secondary education.

According to the United National Educational, Scientific and Cultural Organisation (Unesco), the following percentages were recorded in different countries based on their gross national product. In 1977 the United States education budget was 17,7 per cent, in Australia it was 16,2 per cent and in Botswana 15,6%. During the period 1978-79, South Africa was spending 15,86 per cent on tertiary education (Kruger 1990:327).

The decline in government subsidies for tertiary education resulted in an increase in the dependence on private funds and a substantial increase in tuition fees during the 1980s and 1990s. The higher cost of tertiary education is an obstacle for students from poorer backgrounds, mainly black students. The increased cost also placed a burden of debt on tertiary institutions. Unpaid student debt at
residential technikons and universities in South Africa was estimated at R500 million. The following critical questions should be addressed:

- How can the legitimate aspirations of citizens for access to tertiary education be addressed within the present and future financial guidelines of tertiary education?
- How can the state and the private sector funding of tertiary education best be employed to establish a tertiary education system that satisfies the demands for rectifying the inequalities of the past? (Sebakwane, Kanjee and Malaka 1995:3-4).

Compared to other countries around the world, South Africa’s allocated budget for tertiary education is very low. This allocation has decreased from 24 per cent in 1980 to under 20 per cent by 1990 (Sebakwane 1995:20).

The South African situation poses a unique problem in tertiary education funding because it has to address the question of a racially-inequitable allocation of financial and physical resources at all levels of education. During the apartheid era, allocation of financial and physical resources was based on colour, with the whites being allocated more resources than any other races. While there is a need for equity of financial resources, there are other problems such as an increase in the number of students entering tertiary education. On the other hand there is a drive to increase access to tertiary education for students from disadvantaged communities, while the government’s subsidy is declining. How will tertiary education institutions cope with over-enrolment without the assistance of government and the private sector? (BCSA 1995:20).

Although the state is the main supplier of funds for all tertiary institutions, universities and technikons also receive a part of their funding from other providers, such as investment, tuition fees, private donations and research contracts. The capability of different institutions to earn funds from these non-government sources differs substantially (BCSA 1995:20). Figures 5 and 6 indicate the government grants and other financial sources.
Figure 5: Proportion of university funds in each fund source category, 1985 – 1990 (%)

(Source: BCSA 1995:44)

Figure 6: Proportion of technikon funds in each fund source category, 1988 – 1990 (%)

(Source: BCSA 1995:44)
Financial aid for students in South Africa comes from different sources such as government, universities, technikons, the local business community, foundations and foreign governments. About 80 per cent of scholarships for student teacher training is provided by the government. Universities and technikons assist poor students with bursaries. Some universities have introduced their own student loan scheme. By 1989, many technikons spent 1 per cent and universities 4 per cent of their budget on scholarships. Most bursaries are allocated to students in engineering, commerce and science faculties rather than in the humanities. The larger proportion of student financial aid comes from the United Kingdom, the United States, the European Community and Canada. Other contributors include foundations in Europe and Asia. The funds are channelled through buffer organizations such as the Education Opportunities Council, the Foundation for Peace and Justice, Kagiso Trust and the South African Institute of Race Relations. It is difficult to know the exact amount of assistance from the private sector and overseas donors but these funds are not enough to see more poor students completing tertiary education (Sebakwane 1995:14-15). More funds are needed and the government budget for tertiary education needs to be reviewed. What is the present formula for funding tertiary institutions in South Africa?

3.2.1 The government subsidy formula

The South African Post-Secondary Education (SAPSE) Formula was used to fund universities and technikons between 1984 and 1987. Before 1984, state financing of universities was based on the total number of students enrolled. The basis of the SAPSE Formula was "partly student enrolments and partly success rates." The SAPSE Formula also rewarded the research output of institutions and was in favour of postgraduate students and the number of students in the natural sciences rather than in the humanities. Before 1987, the government also funded technikons. Needs were identified, tested and paid for (Sebakwane 1995:17).

The present subsidy formula is based on the activities of institutions. It distinguishes between the types of activities in the institutions which should be subsidized by the government and those which should be excluded. These activities, according to Bunting (1995:123), are grouped in three categories:

- Activities that benefit the public and should be financed by the government. This includes diploma programmes, teaching, research and the administration of teaching and research.
• Activities that benefit the private sector and the government are not obliged to be financed, for example, student health services, student accommodation and catering, bursaries and community teaching.

• Activities that benefit the public but should not be financed by the government, such as public services and remedial instruction.

The above subsidy formula does not cater for poor students who do not enter tertiary education on the same "preparedness level" as rich students. The envisaged increased access to tertiary education for the poor will fail and tertiary education will remain an education for the rich or élite. When considering the success rate of historically black institutions and historically white institutions, the former lag behind in many respects, which implies that the fundamental question of inequalities should be addressed (Bunting 1995:124 and Mokae 1998:21).

The African National Congress (ANC) in its discussion document entitled "A policy framework for Education and Training" (1994) urges tertiary institutions to lend support to its financing policies which include, inter alia:

• the redress of past inequalities in the funding of tertiary institutions

• the government should make provision for the financial support of historically disadvantaged students

• remedial or preparatory instruction should be government funded.

It concludes with the suggestion that the government financing formula should be the primary instrument for the implementation of national policies for the tertiary education system (Bunting 1995:128).

It is evident from the above information that the current subsidy formula and the funding principles put forward by the ANC document clash in many respects, which implies that the present formula needs to be reviewed so that it can possibly address the core problems facing tertiary institutions, if not all problems, at least some of them.

The new formula should at least make provision for funds for teaching, research, institutional development, development of new programmes, academic aid, bursaries and loans for poor students or deserving poor students. This will help increase the research output of the historically black institutions (Mokae 1998:21, Bunting 1995:127 and Collins 1997:26) in the sense that more poor
students will have the opportunity to study at postgraduate level.

The SAPSE formula favoured the historically white institutions and raised the question of the continued existence of the historically black institutions who cannot sustain themselves financially. The programmes in these historically black institutions are mainly in the humanities while at historically white institutions they are mainly in the natural sciences and formal research output is above that of the historically black institutions both in quality and numbers. Should the historically black institutions close their doors if they cannot sustain themselves or should the government fund them to the level of the historically white institutions? This can be a costly exercise (Pillay 1998:16). Black and white institutions should be integrated according to their locations and provinces, guided by the pruning and grafting of programmes or courses into a single system.

The government subsidy cuts affected universities who experienced rapid growth. The change in formula has had serious implications for the majority of black students and heralded a dark period in tertiary education. Most tertiary institutions were forced to increase fees (Sebakwane 1995:17).

3.2.2 Funding of universities and technikons

By cutting subsidies the South African government disregarded the number of students passing secondary education and who wanted to enter university. The number of students entering technikons has also increased over the past decade and it will not be long before the technikons will feel the burden.

The government subsidy cuts were in contrast to the increased growth in student enrolment at some of the universities. This left universities such as the University of Zululand, Medunsa and the Western Cape in deep financial trouble, as indicated in Table 3.
Table 3: Growth rates in enrolment and state subsidy 1985 – 1990

<table>
<thead>
<tr>
<th>UNIVERSITY</th>
<th>GROWTH RATES (% p.a.)</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>ENROLMENT</td>
<td>SUBSIDY</td>
</tr>
<tr>
<td><strong>Low Growth of Student</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Enrolment</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Potchefstroom</td>
<td>0</td>
<td>- 5.1</td>
</tr>
<tr>
<td>Rhodes</td>
<td>2.3</td>
<td>- 5.3</td>
</tr>
<tr>
<td>Stellenbosch</td>
<td>1.4</td>
<td>- 5.7</td>
</tr>
<tr>
<td>Witwatersrand</td>
<td>2.1</td>
<td>- 3.6</td>
</tr>
<tr>
<td><strong>High Growth of Student</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Enrolment</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Medunsa</td>
<td>10.4</td>
<td>- 5.2</td>
</tr>
<tr>
<td>Vista</td>
<td>19.2</td>
<td>11.0</td>
</tr>
<tr>
<td>Western Cape</td>
<td>11.3</td>
<td>2.2</td>
</tr>
<tr>
<td>Zululand</td>
<td>17.6</td>
<td>- 3.2</td>
</tr>
</tbody>
</table>

(Source: BCSA 1995:48)

The increasing number of students in technikons is not matched by a corresponding increase in subsidies. Technikon Northern Transvaal, Cape, Port Elizabeth, M.L. Sultan and Witwatersrand experienced critical financial problems due to cuts or imbalances between their growth and subsidies. Technikon South Africa experienced fewer problems because it is a distance education technikon (see Table 4) (BCSA 1995:48 and Atwell 1991:44).

Table 4: Growth rates in enrolment and state subsidy at technikons 1988 – 1990

<table>
<thead>
<tr>
<th>TECHNIKON</th>
<th>GROWTH RATES (% p.a.)</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>ENROLMENT</td>
<td>SUBSIDY</td>
</tr>
<tr>
<td>Cape</td>
<td>20</td>
<td>1</td>
</tr>
<tr>
<td>Northern Transvaal</td>
<td>15</td>
<td>20</td>
</tr>
<tr>
<td>Mangosuthu</td>
<td>37</td>
<td>n.a.</td>
</tr>
<tr>
<td>M.L. Sultan</td>
<td>19</td>
<td>16</td>
</tr>
<tr>
<td>Natal</td>
<td>9</td>
<td>7</td>
</tr>
<tr>
<td>OFS</td>
<td>8</td>
<td>29</td>
</tr>
<tr>
<td>Peninsula</td>
<td>10</td>
<td>0</td>
</tr>
<tr>
<td>Port Elizabeth</td>
<td>23</td>
<td>2</td>
</tr>
<tr>
<td>Pretoria</td>
<td>10</td>
<td>0</td>
</tr>
<tr>
<td>Technikon South Africa</td>
<td>69</td>
<td>29</td>
</tr>
<tr>
<td>Vaal Triangle</td>
<td>21</td>
<td>9</td>
</tr>
<tr>
<td>Witwatersrand</td>
<td>23</td>
<td>11</td>
</tr>
</tbody>
</table>

(Source: BCSA 1995:49)
3.2.3 **Income and expenditure at historically black universities (HBU) and historically white universities (HWU)**

Most of the university funds come from the government followed by tuition fees. Between 1985 and 1990 HBU received 83 per cent from the state and 17% from tuition fees. While HWU (Afrikaans) received 75 per cent in 1985 and 67 per cent by 1990, HWU (English) received 69 per cent in 1985 and 66 per cent by 1990. Though the annual average income of the HBU group was higher, it does not imply that there were no inequalities (BCSA 1995:19). The amount per student of HBU and HWU differed considerably between 1985 and 1990. The HBU had an average of R9 700 per full-time equivalent (FTE) while HWU (Afrikaans) had R15 600, and HWU (English) got R17 800 and Unisa R6 400. By 1990, the student growth was uncontrolled and the state unable to fund it, and the subsidy fell by 54 per cent compared to HWU (Pillay 1989:25).

The HWU are better equipped than HBU especially in science and technology. The HWU, due to their advanced infrastructure, also receive research contracts. These advantages were accorded to HWU during the apartheid era, so they are in all respects best compared to HBU (BCSA 1995:19). The HWU also fare well in attracting more donors than the HBU (Saunders 1992:38).

### 3.3 State limitations on financing tertiary education

Since 1985 the government has instituted real cuts in resources allocated to tertiary institutions. The cuts were caused by poor economic growth in South Africa. Higher education has to compete for resources with other government departments such as health, social welfare as well as job creation programmes. Because of the urgency of these services, tertiary education occupies the last position on the list of priorities.

Around the world, developing countries are faced with the demand for access to higher education. This increasing demand together with the constraints of state budgets has meant that the tertiary education system has had to look elsewhere for additional income (BCSA 1995:22). This implies that students too need to look elsewhere for funds. Most students are aided financially by various sources such as grants, vouchers, loans, government subsidies and tax concessions which could stimulate private donors to fund higher education (Melck 1982:145). However, these funds are not enough to assist all the needy students in South Africa or to repay their debts. More funds are needed from the government or private sources.
3.4 Student financing

South African tertiary institutions are owed about R500 million and students from disadvantaged communities are the most affected. Financial aid agencies have been disbursing loans and scholarships by analysing data, advertising and testing the eligibility of students. Each tertiary institution determined their mean-testing methods, which may be abused. The various eligibility testing methods are employed differently by various universities, which exposes them to abuse and manipulation by corrupt officials (Sowetan 1998:12).

The Tertiary Education Fund of South Africa (TEFSA) uses the gross annual income per family and a point system, based on the performance of the student, to determine the eligibility of a student to a loan. The problem with the point system is that many poor students who attend black schools will not receive the required number of points because of their poor performance. The point system is aimed at above-average students or gifted students who pass grade twelve with exemption. This is a small fraction compared to those with a school leaving pass. The latter are a greater majority and TEFSA cannot aid them. They are the real poor who need help. The eligibility test should include these poor performing students who cannot attend university but can be admitted to colleges and technikons (Sebakwane 1995:21).

3.4.1 Diversification of student financing

The diversification of financial resources implies finding alternative financial sources other than the government and student fees, for example, from the private sector, alumni and by fund-raising. This is the first step towards financial independence and the successful management and control of costs in tertiary education because it is not only money that is needed in tertiary education but the expertise and the skill to manage financial resources in an effective and efficient way. Various loan and repayment methods are discussed below.

3.4.1.1 Mortgage loan

There are many types of loan programmes, but there is no single loan programme that can solve all financial problems. The mortgage loan system is the most used around the world by banks. Student loans should be repaid over a specified period (for example, 10 years). The mortgage loan is closely linked with "income-contingent" loans where the amount of each instalment is determined by the graduate’s income when employed. As with any other scheme, the mortgage loan has advantages

The advantages of the scheme are:

- it motivates students to take responsibility for their own future by being cost conscious
- it lessens the heavy burden on the state to subsidize students.

The disadvantages are:

- students from poor backgrounds will be afraid to start working with a heavy debt, therefore they are unwilling to enter higher education
- mortgage loans are complex and difficult to administer, which has led to high default amongst students and heavy debt owed to institutions.

3.4.1.2 Graduate tax

A graduate tax compared to mortgage loans looks more viable because a Graduate Tax (GT) can be repaid over a long period and generate more revenue for the state. It is easily calculated and the problem of interest rates is avoided, because little or no interest is charged. But when the collection mechanism is poor and cannot identify or track graduates. Graduate Tax can create problems of great debt resulting from default (Sebakwane 1995:3 and Pillay 1995:35).

3.4.1.3 Payroll taxes

This is an additional tax paid by firms or industries who employ graduates. The importance of the payroll tax is that it could result in more employment of graduates in the private sector (Sebakwane 1995:35). On the other hand it can scare the private sector from hiring their staff from South African tertiary institutions.

3.4.1.4 Grants

Maybe the simplest way of aiding a student with his/her financial problems is to provide a direct grant, which is a sum of money earmarked for education and without any conditions other than that the grant is restricted to education costs. A well-known form of grant is the scholarship (Melck 1982:145). Grants are mostly given by the private sector based on scholastic merit awards. Loans differ from grants in that the money is borrowed and has to be repaid. Interest charged on loans might be suspended until the student finds work. Grants are not sustainable and cannot cover large

3.4.1.5 Community service

In South Africa, graduates from medical schools are required to do two years' service in needy communities. This is a combination of graduate tax and community service (Sebakwane 1995:37). This scheme is employed in other African countries such as the "Ujamaa" schools in Tanzania and "Harambee" schools in Kenya (Pillay 1989:36).

3.4.1.6 Donor financing

South African tertiary institutions should adopt a "market principle" and start to "sell themselves" to investors. Endowments and fundraising in tertiary institutions is needed (Sebakwane 1995:37). Donor funding should be driven by the needs of the institutions rather than by those of the donors. A shortcoming of donors is that generally they provide funds for buildings and other projects but not for maintenance, thus increasing the running costs of tertiary institutions.

3.4.1.7 Cost-recovery

There is a great need amongst tertiary institutions to create a financing source to redress the decreasing resource base for tertiary education. Cost recovery has been applied by increasing student tuition fees. This has been criticised in different quarters, by students, by lecturers and parents. Furthermore, many developing countries find it very difficult to implement this mechanism because many students are unable to pay (BCSA 1995:23). The most suitable solution to this problem is to combine cost-recovery with other support programmes such as loans, grants and work study. The disadvantage of cost recovery is that it does not motivate but rather discourages some students from attending tertiary institutions. Currently, most tertiary education systems favour high-income families who can afford expensive schools and who can afford to employ household help to allow students to concentrate on their studies (Pillay 1989:33).

Cost-recovery together with support programmes for poor students is a must if cost-recovery is to succeed. For it to succeed, parents, students, donors and the government need to share the costs. In South Africa the burden is placed on the students or the "parents through the students". The question of whether parents should pay or not varies from country to country. In the Scandinavian states parents do not contribute, as the costs are met by the students by loans and the government.
In Korea, the extended family contributes. Parental contribution causes serious problems when parents do not have money. Many students in Europe and in South Africa who fail to pay their tuition fees have to abandon their studies. Furthermore, if students are allocated money without considering the parents’ income, there is the danger of allocating money to high-income students - resulting in an increase in the number of needy students. This has happened in the United States and in Africa where students use aid money for private use. In many developing countries, numerous non-deserving students who were regarded as “independent” received financial aid, making a mockery of the support programmes (BCSA 1995:25).

3.5 Student contribution

Student contribution is the second main source of income for tertiary institutions. Students pay from their vacation income, savings, by working while studying and loans. Borrowing against future income is important but it should not discriminate against the poorer students. In fact, deserving students from disadvantaged communities should be the first to be awarded bursaries and grants rather than loans.

The work-study programme should be instituted for poor students. This programme has been very successful in the United States and the Philippines where students work part-time. In Uganda, work-study has been suggested as a means of paying for accommodation. Work-study could cut institutions’ administrative allocation.

Around the world, states have established student aid mechanisms to help students fund private expenses. For example, Japan allocates subsidized loans for about 20 per cent of students, while in Francophone Africa about 80 per cent receive scholarships. Furthermore students receive subsidized welfare benefits from their universities, such as health care, which constitutes 10 per cent of the operating budget. In Latin America and Asia, students are awarded scholarships on merit rather than need.

3.5.1 Increasing tuition fees

Raising fees has been a problematic option for tertiary institutions. In South Africa, many technikons and universities have experienced resistance from students, lecturers and parents. In Kenya it resulted in extended closure of tertiary institutions (BCSA 1995:26).
Unless parents start saving a great deal of money from the time their children are born, they will have to tell them it is financially impossible for them to go to university (Malunga 1992:40 and Badenhorst 1990:37-38). The cost of tertiary education is ever-increasing. Hundreds of poor families have been carrying the burden of having to meet the cost of tertiary education. Many black students do not complete their studies owing to a shortage of money. This pattern has caused huge groups of unskilled people who cannot be accommodated in the job market. Those who get jobs, do not earn enough money to further their studies. Black matriculants leaving high school raise only 6 per cent of the funds for tertiary education and tertiary fees increase on average by 13 per cent, some estimate it to be as high as 20 per cent (Mondstuk, 1989:1). David Maepa, chair of the Soweto Education Co-ordinating Committee, argues that almost all black families are unable to afford the cost of a university education. It is totally out of their reach (Malunga 1992:40).

Fees at South African tertiary institutions differ from one institution to another ranging between R7 500 and R10 000 per year. This covers tuition, books and accommodation. The most expensive fees are in science programmes. Most black parents cannot afford medical school fees or the cost of science studies (Collins 1997:23).

Within two years the fees for a third-year engineering student at university will be R15 700, way above the earning capacity of the family (R11 000). Maepa argues that education should take only 10 per cent of the family income, but looking at the situation in tertiary institutions, relief from the heavy burden of debt is still far off. The parents' salaries ought to be increased in line with inflation and the government subsidize tertiary education by 25 per cent from the national income to cope with increasing tertiary education costs. Looking at the economy one cannot anticipate a major growth until the next millennium (Malunga 1988:41).

About R50 million was needed in 1992 to assist 6 000 poor students, says Professor P. De V. Booyse, projects co-ordinator of the Tertiary Education Fund (TEF), an arm of the Independent Development Trust. This means that by the year 2000, R86 million will be needed to assist poor students. This amount may increase. Mogale Mphahlele, an educationalist, agrees that university fees are increasing rapidly due to a cut in subsidies by the government. He believes that this action by the South African government is aimed at reducing the number of black students at tertiary level. This is a moot point because the government cannot carry the blame alone, rather one can put the blame on apartheid and the corruption in tertiary education, especially in black tertiary institutions.

Dr Ivy Matsepe-Casaburi, an executive director of the Education Development Trust (EDT) shares
the same sentiments as Mphahlele. She further says that the private sector should become more involved as these problems coincide with a rise in the unemployment figures (Venter 1994:18). Dr Matsepe-Casaburi added that the number of students entering universities does not indicate the true picture of the demographics of South Africa. While 31 of out 1000 white students enter tertiary education, only 3 out of 1000 black students do so. Around the world the acceptable figures are 9 students out of 1000 (Malunga 1992:41). Dr Matsepe-Casaburi also believes that the heavy burden of loan programmes will affect poor graduates who have to repay the loans, if the loans are closely connected to inflation rate (Malunga 1992:41). This could lead to poor graduates remaining poor until they settle their debt.

For many years the liberal South African universities fought against apartheid and today they face another obstacle and that is to convince the government that it is worthwhile and important to fund universities. Tertiary education in South Africa is not prioritized because of the huge backlog in essential services such as health, social welfare and primary education.

During the apartheid era private donors poured money into non-governmental organizations, but since 1994 institutions have to look to the ANC government for funds because private donors now channel their gifts through the government. The government decides how the cake should be divided and who should get what and when (McGregor 1994:9). While this system seems commendable, in reality the autonomy of tertiary institutions is threatened. Furthermore, this system is open to abuse by government officials as funds may be diverted to other state functions or exploited for political reasons. In 1994, South African tertiary education was awarded R80 million by the European Union (EU) in the form of bursaries. Bursaries and loans worth R4 million were given for tertiary education by the British Overseas Development Administration (ODA), which allowed about 20 000 black students into tertiary education. Many poor students could not be helped because of a lack of funds.

Isaac Sam, chief of the World Bank mission in South Africa, held negotiations with the South African government, but in this case it was bad news for tertiary education as the World Bank tends to favour primary and secondary education to tertiary education. In its report on developing countries, the World Bank made it clear that it would lend money only to university projects which are efficient and cost effective (McGregor 1994:9). The World Bank regards university students as sons and daughters of wealthy families, who will be earning high salaries after graduation, so therefore they should pay more for tertiary education. In South Africa, though, one cannot generalize in this way because more and more students come from poor backgrounds. (Many black students who have
cell phones and wear fancy clothes from leading stores, give support to the World Bank's belief.)

The default by students at tertiary institutions has plunged them into more than R500 million debt. The ODA and EU are engaging in talks with the new government about financing tertiary education and the management of these funds. The Tertiary Education Fund of South Africa is to administer the funds. Roy Jackson, the executive director of the Tertiary Education Fund of South Africa (TEFSA) estimates that a loan of R180 million will be required annually to satisfy the demand for loans. About R4 million was donated by ODA in 1994 to manage bursaries and loans for students attending historically white universities such as Rhodes, Cape Town, Natal and the Witwatersrand. The donors favoured the science students. There are also gross imbalances based on race. More whites than blacks qualify in natural sciences (Collins 1997:23).

There was no smooth ride for the ODA and its policy on the eligibility of students. The ODA stated clearly and emphatically that only poor students would receive aid. This triggered discontent from students who felt neglected. Another problem that faced the ODA was the time that some students took to complete their degrees. Students spent five to six years on three-year degrees. Some students were assisted by the ODA at historically black universities. The ODA programme was also extended to technikons. Besides loans and bursaries, ODA also financed academic projects at the University of Western Cape and awarded scholarships to students who wanted to study at British Universities. The question of sustainability remains a crucial one because one cannot have a programme of R80 million one year and nothing the next year. Roy Jackson (TEFSA) highlighted his concern about subsidy cuts and donors who negotiate with the government. They should ensure that the donations reach higher education institutions and are not diverted to other essential services. "I would like to see donors earmarking donations to the new government, for example, for student loans. At last we have the government we want, but I am terrified that, with all the needs it has to satisfy, higher education will be neglected" (McGregor 1994:41).

3.6 Higher education financing

Like in many countries around the world, South African tertiary education institutions are mainly funded by government. South Africa has a large student enrolment population. Tertiary institutions received less than half of their running costs from the government, about R2 600 million and the student contribution was estimated at R1 000 million. Other sources were state sources through research grants and endowments (Sebankwane 1995:46).
Professor Jan Kirsten, chairperson of the South African Universities Vice-Chancellors Association (SAUVCA), pointed out that our tertiary education system is the best developed and resourced in Africa, with highly competitive teaching and research capacity that has so far assisted in creating and sustaining a first world infrastructure in the field of industrial knowledge and medical services. Even in comparison with international indicators, South Africa is well resourced. However, according to Professor Kirsten, the system has countless flaws such as being élitist, providing unequal access, being fragmented and unco-ordinated, limiting student mobility, not being cost-effective, inadequately financed in some departments and under-financed in others, especially in the historically black institutions and in distance learning (Graduate 1998:11).

Tertiary education is unresponsive to many of the socio-economic needs of South Africa, there is an overproduction of graduates in the human sciences while there is a shortage in the natural sciences. There are more students in universities than technikons, with few systemic initiatives such as quality assurance in place, there are not enough investments compared to other countries in the world such as the United Kingdom and the United States of America (Graduate 1998:11).

According to B. de L. Figaji, chairperson of the Committee of Technikon Principals and Principal of the Peninsula Technikon, "lack of capacity in the areas of management, planning and implementing is one weakness".

Irma du Plessis, chairperson of the Student Representative Council at the University of Pretoria (UP), in 1995 argued that there is an over-emphasis on tertiary education. She believes that there is a gap between universities and technikons, with universities providing high-income courses for which they do not have the right practical content. She further said that the current situation of the historically black institutions is unfair because there are still inequalities. They cannot hold their own against the former historically white institutions in terms of environment or the type of student that enrolls. She believes that stronger universities should be identified and the number of universities cut and create a quota system that will direct more money into programmes that address the needs of the economy (Graduate 1998:12).

3.7 South African tertiary institutions

The problems in South Africa, whether financial or non-financial, are worsened by tertiary institutions based on race and unequal resources and infrastructure provided to them. The tertiary education system in South Africa is comprised of 15 technikons, 21 universities, 100 teacher training colleges
and 129 technical colleges, which form part of post-secondary education. Technikons are secure in their admission and they take the form of British polytechnics and some forms of the American Community Colleges. Technikons in South Africa, unlike their American counterparts, require grade 12 or “matric” for admission. In 1990, enrolments at universities numbered 302 036 and at Technikons, 67 266.

Tertiary institutions were also racially segregated. Fort Hare served the black community for a long time, the University of the North, the University of Zululand, the University of Transkei, Bophuthatswana, Venda, Vista and the Medical University of Southern Africa all served the black community.

There were five Afrikaans universities. These included the University of the Orange Free State, Stellenbosch, Pretoria, Rand Afrikaans and Port Elizabeth. The English-medium universities included the University of Cape Town (UCT), the oldest in South Africa, Natal, Rhodes, the University of the Witwatersrand and the University of Western Cape for coloureds (Atwell 1991:42).

South African tertiary institutions are not evenly spread around the country. South Africa consists of nine provinces but provinces such as the Northern Cape and Mpumalanga do not have a single technikon or university (Graduate 1997:17). This also affects the spread of graduates amongst provinces (Figure 7).
The financial support given to tertiary institutions by the government or the private sector was racially skewed. The historically white institutions received better subsidies than the historically black institutions during the apartheid era. Now the historically white institutions and the historically black institutions face similar problems, the cut in subsidies while the number of students grows rapidly. For example, Gauteng's education budget was cut by 2.48 per cent, Western Cape experienced a 5 per cent cut, North West a 16.2 per cent cut, Eastern Cape and Northern Province experienced a cut of 14.5 per cent and 11.8 per cent respectively.

By 1995 the number of white students increased from 107 300 (in 1992) to 118 861, against a 40 per cent increase in the number of black students from 127 023 to 178 565. The number of Indian students increased from 19 134 to 27 115 and that of coloureds from 11 229 to 14 836 (Mittner 1997:10). South African tertiary education has grown rapidly over the past ten years. Tertiary institutions produce more than twice as many graduates as they did in the past decade. Though the actual number of students doubled, the number of students in the fields human science and management grew more rapidly than the number of students in the natural science and medical science fields.
The imbalances in South African society are more visible when one looks at the racially skewed distribution of graduates. Whites still produce the highest number of graduates in natural science, medicine, human and management science. Gauteng has the highest concentration of graduates, more than any other province in South Africa (Graduate 1997:15). The need to make tertiary education available to the disadvantaged groups is urgent. Bursaries and loans are a necessity in this regard. To assist needy students, TEFSA needed R32 million a year and students still owe R17 million for tuition for 1993.

In the past three years, TEFSA has allocated about $27 million in loans to 26,000 needy black students attending 25 universities and technical institutions. TEFSA encountered some problems. Students blamed TEFSA for being unrepresentative and not supplying enough money to black students. This led to the withdrawal of the South African Student Congress. This loan programme has only been able to aid “10 per cent of the eligible students”, leaving many poor students without help (Verganani 1994:A37).

With South Africa’s history of disparity in the access to resources, education or tertiary education is often regarded as a solution to the problem of poverty. It is viewed as the key to the job market and the vehicle by which black people may find redress. But the financial barrier is still intact and threatening the very first steps towards economic freedom, that is access to tertiary education (Bell 1996:20). There is a need for effective student financial support and TEFSA needs to be supported by both the government and the private sector.

The present National Student Financial Aid Scheme received R322 million from different sources, including the International Donor Agency (IDA). The scheme is managed by TEFSA. It operates on the income contingency plan, whereby students repay their loans at low interest. The graduates only start to repay the loans once they are employed. As an incentive, students also receive rebates of up to 40 per cent on each course passed.

In 1990 the Independent Development Trust (IDT) created TEFSA and by 1995 the latter had committed 114 880 awards of R3 000 each to students in tertiary education. By the end of 1994, about 51 557 students had already been assisted. In 1996 the average award was R5 000 per student and the organization was promised R300 million from the government to help about 60 000 students countrywide.
Graham Renecke, head of financial aid at the University of the Western Cape (UWC) to which TEFSA contributed about 80 per cent (R2 million) of funds, believes that TEFSA’s broad guidelines are "acceptable, especially as these are all left to the tertiary institutions to employ." TEFSA requires eligible students to be economically and educationally needy students. They should be deserving students. The South African Congress (SASCO) supports the idea and suggests that "reserves" (surplus funds) should be used to fund their students (Bell 1996:21 and Keeton 1995:2).

TEFSA's maximum grant is R10 000 per annum while the minimum is R800, therefore individual students should supplement their support; for example, annual costs at UWC are R15 500, divided as follows: R5 000 for tuition, R6 500 for lodging and R4 000 for food. Out of 13 600 students at UWC in 1996, 4 800 were from outside the Western Cape area. A survey conducted in 1995 amongst 4 300 students indicated that about 34 per cent (1 458) were from families with an annual income below R21 000 per year, which implies that 66 per cent of the sample families earn less than R1 750 per month, indicating that these students really need financial assistance (Bell 1996:22). TEFSA has been able to aid only 10 per cent of poor students (Jackson 1994:7).

UWC is an example of a historically black institution whose financial problems were worsened by the complex and sophisticated formula employed by the government in funding tertiary institutions. The government subsidy, which has been cut, covers between 50 per cent and 60 per cent of the actual costs. The balance is expected to be made up from the private sector: 20 per cent from the student tuition fees and 15 per cent from contracts. Donations, research grants, endowments, payment of accommodation and food covers between 10 per cent and 15 per cent (Bell 1996:22).

Historically black institutions cannot be helped adequately because in the past their financial resources were inadequate and with the high enrolment of students from poor backgrounds, the situation cannot be solved by loan programmes only. The government's subsidy cut has plunged many historically black institutions into deeper financial crisis. The relationship between business and the historically black institutions will take a long time to be cordial because of the legacy of apartheid (Bell 1996:22 and Mokae 1998:21).

While students such as Mbohadi Lesogo Mosetle and Mokindi Puzi thank TEFSA, there are too many needy students for TEFSA to finance alone. Not everybody is satisfied with how TEFSA runs the loan scheme. Stephanie Allais of the South African Student Congress (SASCO) questions the loan scheme's sustainability on the grounds of the high unemployment of graduates and the growing number of student enrolments (Bell 1996:22).
The dilemma facing TEFSA is whether it should continue to fund students in the humanities while South Africa needs scientists, engineers and technologists. Most of the needy students are in the human science fields, not because they choose to be in this category but because it was the only field they could go into. To study Natural Science in the rural areas would be wishful thinking as there is no apparatus or equipment for the teaching of science subjects. This shows that money cannot solve all problems. Is TEFSA really assisting the poorest of the poor? The above analysis casts doubt on the "broad guidelines" of TEFSA on the point of giving individual tertiary institutions the mandate to apply these broad guidelines. The "broad guidelines" can be abused by various institutions or if there is no mechanism to ensure that these "principles" are adhered to or applied word for word (Bell 1996:23 and Educamus 1990:3).

The tragedy of many black students starts at school level and it includes teachers who are underqualified to teach science subjects. Even those students who pass science at school will find it hard to complete their degrees, taking five to seven years for a three-year course. The funding of a bridging programme is needed for rural students or students in general who enter tertiary institutions (Bell 1996:23). The same sentiments are voiced by John Samuel, who believes that universities should produce graduates to meet the national requirements (Collins 1997:21). In many historically black institutions most students choose the social sciences especially education, which has led to an overproduction of teachers. Historically white institutions have more social science students compared to historically black institutions and more students in the natural sciences. As a result these tertiary institutions attract lucrative grants from the private or business sectors (Mokae 1998:21).

3.8 Private financial sources

Private financial sources include contributions from business, industry, endowments and donations. The higher education system in South Africa is in a critical state. Overall state subsidies to tertiary institutions are decreasing, adding to the problems they already encounter due to inflation and the overall drying up of initial sources of revenue. The pattern is clear: expenses continue to rise while the government's contribution to running expenses declines. The focus is on increasing alumni and past business friends to augment the university income, but according to the report given by the University of the Witwatersrand Foundation, the alumni are also affected by inflation. This is indicated by the poor response of alumni. The pressure is thus on commerce and industry, the main employers of graduates, to narrow the gap between income and expenditure, subventions of academic salaries and to finance "bricks and mortar" projects (Friends 1987:28). The University of
Venda has succeeded in raising only R91 600 from alumni (Mamaila 1998:7). For the historically white institutions it is different as they have a long history of better funding and established in fund-raising including good relations with big companies.

One of the companies that has been in the forefront of this type of assistance is AECI. Over the past ten years AECI has donated more than R4 million to 14 universities, colleges and technikons. The AECI's Quality Life Budget, has a separate budget used for schemes and projects in tertiary institutions, such as providing equipment, facilities and the redevelopment of campuses. The significant function of this budget is to make provision for subventions to academics to attract highly qualified professors and lecturers to stay at or to come to the universities. Furthermore, the money is used to fund research for industries (Friends 1987:28). Historically black institutions have attracted very few research contracts because of their history (Mokae 1998:2).

For example, AECI provides R7 000 annually for the head of Chemical Engineering Department at the University of Natal, while lecturer, Jim Rodgerson, receives an annual subvention of R4 000 for his work in electrical engineering. The University of the Witwatersrand received a grant of R500 000 for the establishment of a new engineering complex (Friends 1987:29).

Although AECI concentrates only on the historically white institutions, few black students are in the field of engineering. It is a shining example of what is desired from industry or the private sector. It would be good to have such commitment in other fields such as education, management and medicine (Friends 1987:30). The Witwatersrand Foundation donated salary subventions, bursaries and research aid amounting to between R11 million and R12 million annually, while the HBU could raise only about R9 million each (Friend 1987:30). AECI is not the only company committed to assisting tertiary institutions; Woolworths, South Africa and Marks and Spencer of Great Britain, have donated R1 million to fund postgraduate students at the University of Cape Town in 1997. The funds are earmarked for business and environment management. The programme is anticipated to run for two decades (Sowetan 1998:11).

In South Africa many foreign governments are lending a helping hand to tertiary education and education in general. The French government donated R14 million to the transformation of the South African educational system. The gift is to be spent as follows: R11,5 million for the training of teachers in science, mathematics and technology; R750 000 for national business initiatives and equipment programmes and R1 million for bursaries for needy students studying French at a South African tertiary institution (Sowetan 1997:9).
Listeners of FM Stereo also donated R20 000 to first-year medical technology student, Mathabo Botsane, whose mother earns R60 per week on a farm (Mohale 1998:8). The Fulbright Scholarship has also opened doors for applications from postgraduate South African students to study in the United States. The grants include full bursaries, including tuition, travel and basic costs and half bursaries, covering only half of the total expenses (Bengu 1998:2). The Development Bank of Southern Africa granted Mangosuthu Technikon in Umlazi R18.4 million, partly to fund the 22 million rand multipurpose hall and modern lecture theatre. The technikon received an additional R4 million from the Reconstruction and Development Programme to expand student residences in order to accommodate an additional 1 120 students (Sowetan 1998:2). Metropolitan Life provided six higher education bursaries to the value of R5.5 million covering tuition fees, meals, accommodation, travel costs, registration and personal expenses to students in tertiary education (Sowetan 1998:5).

Amid these promising examples of commitment from the private sector and the government, there are still financial problems in tertiary education, especially in the HBU. “Vice-chancellor told to resign as management rejects demands”, writes Khathu Mamaila (Sowetan 1998:4). “No more debt, varsities vow: students forced to cough up”, commented Andrea Weiss (Argus 1998:1). “Varsities to crack on defaulters”, said Nthabi Moreosele (Sowetan 1998:1). These headlines bear testimony to the financial problems facing tertiary institutions in South Africa and the conflict these problems cause in society.

The Medical University of Southern Africa (Medunsa) faces an uncertain future because of lack of funds due to the government’s subsidy cuts and may have to close down if funds are unavailable (Motale 1998:5). “There are no easy solutions. Behind the campus protests lies a stark reality that student debt has escalated and the state cannot keep up”, writes Claire Keeton (Sowetan 1998:10). But there should be a solution. “Apartheid” cannot be blamed for ever.

The tertiary education system should be transformed so as to face these challenges and no one will do it better than the government, tertiary institution management, students, parents and the private sector working together. All the money poured into tertiary institutions’ coffers and schemes will not solve the financial problem unless there are mechanisms in place for offering loans and the repayment of loans in a sustainable way. Ahmed Essop, Chief Director of Education and Planning, said that there is not an endless pot of money; for example, the National Student Financial Scheme for 1998 had R337 million available for needy students, but to fund 80 000 students it needed R45 000 million more according to Andrew W. Mellor foundation’s report (Sowetan 1998:10).
Victor Mecoemere (Sowetan 1998:1) believes that the crisis might spread and eventually cripple tertiary education in South Africa if solutions are not found (Mecoemere 1998:2). South Africa's desire to join the world as an economic power is not being addressed fully because at the time when there is a desperate need for highly trained, skilled labour of all races, the majority of students are still in the humanities and large sums of money are being allocated to fund these students who will not be absorbed into the job market and will join the unemployed masses who are educated but jobless. This can be regarded as a waste of resources. South Africa should move away from a "social welfare" model of funding and develop a market-orientated model which will be market-driven or need-driven.

3.9 The problems of repayment mechanisms

The repayment mechanisms in South African tertiary institutions seems to be faulty or inappropriate. There is also corruption or mismanagement of funds in tertiary institutions (some examples are given in Chapter One). The Vaal Technikon's vice-chancellor was suspended on allegations of mismanagement of funds (Mlambo 1998:2 and Smidt 1993:28).

Many tertiary institutions are still discussing repayment mechanisms. The University of Turfloop, with R83 million owed to it, has reached an agreement with its students that the students will pay, but the settlement will hold only as long as both parties keep their promises. But as students are temporary at an institution, soon there will be new leadership and the conflict will resurface as soon as the new leadership takes up office. On the other hand, many institutions seem not to have followed Turfloop's example (Mulaudzi 1998:19). The repayment mechanism that will be recognized and accepted nationally will have to solve the problem of repayments. The University of the Free State (UFS) allowed only students who owe less than R6 000 to register. The provincial administration had not paid the UFS the bursaries promised to students. Consequently, the UFS gave students up to 3 April 1998 to pay up or their registration would be cancelled, whether students were on provincial bursaries or not (Sowetan 1998:5).

The University of Fort Hare had a similar arrangement with students. In terms of the agreement, students owing less than R4 500 would be allowed to register but should settle their debt before November 1998 and those with more than R4 500 outstanding should reduce their debt to R4 500 before registering and agree to pay the balance before November 1998 (City Press 1998:14).
The University of Venda (UNIVEN) took a hard line and reopened in 1998 for paid-up students only. At the re-opening, only 1,000 of the 7,000 students had registered and the standoff continued unresolved (City Press 1998:14).

Many agreements are entered into between management and students, but sooner or later conflicts flare up in tertiary institutions because some of the students who owe money to these institutions have graduated and cannot be traced or there is no mechanism to trace them. Some of the students simply do not have money, while others have the money but do not want to pay. There are allegations against students who are given money to pay by their parents but do not pay and their parents are surprised when the examination results are withheld.

Life in tertiary institutions is becoming very expensive but crime makes life even more dangerous. Statistics published by Professor Sibusiso Bengu, Minister of Education, indicate that tertiary institutions lost 100 teaching days and damage to property amounted to R4 million for the period July 1996 to July 1997 (City Press 1998:17). Such losses are an extra burden on tertiary institutions and increase the backlog. The cost of crime at tertiary institutions emphasises the fact that money alone cannot solve all the problems of tertiary education. Putting money into an unstable environment will not do anybody any good. The whole situation should be addressed starting with the administration and management of funds. Real transformation of the historically black institutions and historically white institutions is needed. All traces that separate or identify these institutions should be eradicated and the government should fund the tertiary education system, not only the historically white institutions or historically black institutions but universities, technikons and colleges and the private sector and individual donors should assist the government.

In 1997 the government decided to increase aid to tertiary institutions by R300 million while the students owe a massive R500 million. When the current year account is added, it does not give any hope for “cash-strapped” university and technikon students that have this extra burden, this brings no relief to their financial troubles. One thing is clear, their debt will just increase further (Sowetan 1998:12).

3.10 Parental contribution and rising costs

Parental contribution is a thorny issue and South African parents, especially black parents, cannot cope with the rising costs of tertiary education. The situation is worsened by the government’s subsidy cuts which force educational institutions from primary to tertiary level to increase their fees
(see Table 5). Many South African parents are living on the breadline. To them tertiary education is a luxury they cannot afford and there is no promise that the situation will improve but many parents prefer to send their children to Model C schools or private schools which are more expensive than public schools meaning that by the time their children enter tertiary education, there will be no money left.

Parents have only one option, that is, to start saving or planning for the future of their children from birth. Parents should save about R200 per child every month for tertiary education, from when the child is five years old. The parents will definitely pay up to R450 per month for tuition only. Derek Zietsman, deputy general manager of Sage Educational Trust believes that tertiary education should be given top priority when it comes to investment planning, above an expensive house or car (Sowetan 1998:19). Zietsman believes that loans will be impractical in the future and private schools will be unaffordable for the masses. In this situation parent counselling is necessary to teach and make parents aware of the importance of investing in the child's education. Parents should be involved in their children's education and know more about the financing of education so as to prepare for tertiary education.

Parents should take out educational policies for their children. There are banks such as ABSA who advise parents on financial matters and educational policies. Insurance companies such as Old Mutual, Sanlam and Metropolitan Life also offer education policies. There are reasons to prepare the future of children. One of the main reasons is that as parents we do not control the future but the good news is, parents could prepare for the future. Maybe parents will not be there when their children need money for tertiary education and good investments, savings and educational policies could assist the students financially. Counselling for parents from primary to tertiary level is necessary. Such programmes should be introduced at work places and tertiary education institutions. Parents must be informed. The present system in tertiary education keeps parents in the dark over financial issues. The following table indicates the projected increase in tertiary education expenses over the coming decades and the value of investing in children's education (Sowetan 1998:21).

Tertiary education - the cost and who should carry it - is an explosive issue. The principle has been established, however, that no student should be forced out of the system due to poverty (Keeton 1995:2).
Table 5: Increasing cost of school and tertiary education

### The Projected Growth in Public Schooling Costs
(Projected at 12 per cent a year)

<table>
<thead>
<tr>
<th>YEAR</th>
<th>AMOUNT</th>
</tr>
</thead>
<tbody>
<tr>
<td>1997</td>
<td>R 3 200</td>
</tr>
<tr>
<td>2001</td>
<td>R 5 035</td>
</tr>
<tr>
<td>2005</td>
<td>R 7 923</td>
</tr>
<tr>
<td>2009</td>
<td>R 12 467</td>
</tr>
<tr>
<td>2013</td>
<td>R 19 617</td>
</tr>
<tr>
<td>2017</td>
<td>R 30 868</td>
</tr>
</tbody>
</table>

### Projected Growth in Tertiary Education Costs
(Projected at 12 per cent a year)

#### University Degree
1997 less than R 10 000  
2017 R 82 958

#### Technikon Diploma
1997 less than R 10 000  
2017 R 42 444

### Projected at 12 per Cent a Year

<table>
<thead>
<tr>
<th>YEAR</th>
<th>AMOUNT</th>
</tr>
</thead>
<tbody>
<tr>
<td>1997</td>
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<tr>
<td>2001</td>
<td>R 15 106</td>
</tr>
<tr>
<td>2005</td>
<td>R 23 769</td>
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<tr>
<td>2009</td>
<td>R 37 401</td>
</tr>
<tr>
<td>2013</td>
<td>R 58 852</td>
</tr>
<tr>
<td>2017</td>
<td>R 92 604</td>
</tr>
</tbody>
</table>

(Source: *Sowetan* 1998:21)

### Summary

The financial problems in tertiary education are far from over. In the past decade the problem has taken another turn. The new political dispensation in South Africa has put pressure on tertiary institutions not only to look at the question of financial support for the poor but also at the question of access of formerly underprivileged students. Transformation is a word often heard in the tertiary education community. There is a need to see tertiary education represented in the demographics of South African society without lowering the quality and the standard of education, the effectiveness
and efficiency of the management of financial resources also needs to be improved.

Although more money is being made available by the government and foreign donors to higher education, the historically white institutions still attract more funds than the historically black institutions because of their advantages in terms of better infrastructure and research capabilities. The historically black institutions still lag behind in many respects and the need to transform them is urgent. The facilities at historically black institutions need to be upgraded which will cost a lot of money. Many historically black institutions find it difficult to cope with the subsidy cuts introduced recently by the government. The competition for funds by both the historically black institutions and historically white institutions will not benefit the former because of the poor relationship, during the apartheid era, with companies or the private sector. The whole question of redressing past imbalances needs to be reviewed.

Tertiary education occupies the bottom of the list of government priorities, compared to other social responsibilities such as health and infrastructure. It has been regarded by many organizations and governments around the world as a luxury. Many world organizations regard tertiary education as supplementary to primary education. Even the World Bank is occupied with financing primary or basic education and literacy programmes and gives higher education little attention. On the contrary, countries such as Japan, Malaysia and South Korea have invested in tertiary education and today they are reaping the benefits of their investment. Their economies are growing satisfactorily as a result of their investment in the youth and in tertiary education.

The problem in tertiary education in South Africa is not only financial, there are also management problems relating to corruption, racial prejudice, incompetence and faulty financial mechanisms. For example, the fact that there is no uniform natural means test and that individual tertiary institutions apply their own rules, opens the system to abuse or corruption. In Sub-Saharan Africa, many students who have acquired loans, which they do not deserve, have used the money to feed their families or for personal use.

The damage caused by rioting students at tertiary institutions around the country hinders the financial recovery at most tertiary institutions. The damage increases the debt of the students.
Many students and parents in the rural areas are still in the dark about how bursaries and loans work. As a result, they are left out. The funding formulas are also complex and difficult to understand. As for loans, many students do not want to start working with a heavy debt on their shoulders.

The repayment mechanism of most tertiary education institutions during the apartheid era left much to be desired. These institutions allowed the student debt to grow to the present level of R500 million (Keeton 1995:2). Was the management of these institutions aware of what was happening? Were they intimidated into doing nothing because the political climate of the apartheid era or did they simply lack the administrative skills to cope with the problem?

Deals and agreements to recoup outstanding fees are struck between management and student organizations but the agreements do not last. How can one collect money from poor students? Mapula Sibanda said in City Press (1998:17), “These ‘poor’ students just cannot do without their cell phones and designer jeans”. Who has the money and who should be paying for the students when they live in luxury?

The constitution of South Africa entrenches human rights. There is no student who should be prevented from learning because he does not have the money to pay. This adds to the problems facing tertiary institutions in South Africa. The solution to the problem is still evasive and it is frustrating for all concerned.

There is also an increasing number of students, especially from disadvantaged communities, entering tertiary education. Most of these students are in the humanities. Many private companies employ students with science subjects, such as mathematics and physical science. Disadvantaged students do not have these subjects therefore they are left out. Commercial banks also need security for loans by Government. Bursaries and loan schemes are overwhelmed by the number of students in need and they are only able to help 10 per cent of the total number of applicants.

In the end every tertiary education institution in South Africa will need to improve its infrastructure and human resources otherwise the academic standard will drop because over-enrolment will put pressure on every facility on the campus resulting in the deterioration of buildings and libraries. Makerere University and other Sub-Saharan institutions experienced this deterioration. A university designed to accommodate 4 000 students enrolled 20 000. Makerere University is today a shadow of its former self and many universities are heading down the same road. Can South African
Universities escape this?

The funding of students who will not be absorbed into the job market creates a problem for tertiary institutions because if there is no future employment, students cannot repay their loans, leaving institutions with huge debts.

How can the tertiary education system in South Africa run effectively and efficiently? Have tertiary institutions or the government the expertise and skills needed to run these complex institutions? How can tertiary institutions find additional funds from private sources? Is government interference in private donor funds justified, that is, should private funds be channelled through government or directly to the tertiary institution?

At the root of all these problems lies the lack of planning and co-ordination in the management of financial resources. Many institutions around the globe are still run by the government or its agencies who lack the expertise and skills to plan properly. Whether the government plays a major role or not, planning needs to be done to avoid some of the problems.

The next chapter will deal with how financial resources should be planned in tertiary education and the government’s role in that planning. Planning is important because it assists tertiary institutions and the government in implementing the right strategies and to become proactive and effective in the management of students’ financial affairs. The discussion will be centred around planning, co-ordination between the government and tertiary institutions and strategies and techniques to be employed in the control and management of costs in tertiary education.
CHAPTER 4

PROACTIVE MEASURES AND STRATEGIC MANAGEMENT OF FINANCIAL PROBLEMS IN TERTIARY EDUCATION
4.1 Introduction

The term “strategy” is derived from the Latin word “strategos” meaning army. Strategic is a military term. In simple terms it implies well-chosen methods and techniques to achieve certain goals. In this study, strategy refers to the implementation of pro-active measures to counter subsidy cuts and effective and efficient management of finance in student affairs in higher education (Pratt 1990:49).

The reasons for declining financial resources originate from an unexpected increase in enrolment of students in tertiary education, the continued economic decline and the increased competition between tertiary education and other components of education, namely primary, literacy and secondary education (Hunt 1997:7). This topic has been widely surveyed in the professional literature over a number of decades, which indicates that these problems have been around a long time, especially since the late 1960s. The theme also covers many facets of tertiary education including general revenues, the relationship of expenses to tuition fee increases, work load, faculty salaries, administrative expenses and research costs, but the financial aspect occupies center stage because of declining financial resources and expanding enrolments. Owing to this, tertiary education financing calls for effective management (Waggaman 1991:IX and Chronicle 1990:51). This has placed huge pressure on tertiary institutions and governments to accommodate the expanding number of students who want to participate in this complex and technological world economy (Ziderman 1995:IX).

There is also a problem with the overproduction of graduates who cannot be absorbed by the job market. Statistics released by the South African Graduates Development Association (SAGDA) estimates that of the 660 000 graduates in South Africa, about 30160 are unemployed. SAGDA put the blame on the shoulders of the tertiary institutions for the poor curriculum which does not prepare the students for jobs (Ngomane 1998:12, Psachoropoulos 1986:1 and Tuckman 1980:208).

In most developing and underdeveloped countries, there are many students who have studied the humanities, law, education and business courses which are low-cost courses, that is, the mentioned courses are less expensive than engineering, medicine and technological courses. But as tertiary education is seen as a vehicle for economic development, there is a demand for both more graduates and research opportunities in scientific and technological programmes. Consequently, there is a greater demand to attract more financial resources to fund workshops, laboratories, the practical development of students and the recruitment and retention of experienced faculties in technology and science. There is also the need to improve the quality of tertiary education for every
student. Huge lecture notes and the practice of buying lecture notes for examination purposes are no longer acceptable. The attention on quality in tertiary education means innovative methods of supplying learning opportunities to ensure the better use of technology, internships, teaching or tutoring and co-operative learning situations. These new methods require the creation of modern library resources rather than "a compilation of lecture notes of the professor" and the storage of documents and data bases via electronic computers. All these developments have crucial financial implications (Ziderman and Albrecht 1995:IX).

Another problem in tertiary education pertains to the issue of equity. In South Africa, involvement in tertiary education is determined by social background, region and race. The more privileged students attend the better and more expensive institutions. There is increasing pressure from the public for equity. But this equity will not come cheaply as the expansion of the scientific and technological capabilities of tertiary institutions requires a great deal of funds for structural changes and human resource development.

The sheer increased expansion of the tertiary education system has caused serious financial problems in many developing countries and in South Africa in particular. This, coupled with the move towards more expensive courses, adds the drive for improved quality and greater equity but the financial picture of tertiary institutions looks bleak. The seriousness of the situation does not imply that it is only the financial aspect of the tertiary education system that needs attention: the entire tertiary system needs to be restructured concerning its delivery, finance, participation and accountability on the part of institutions, governments and other stakeholders (Ziderman 1995:X).

4.2 Rising costs and control

The increasing cost of tertiary education is cause for concern in many sectors of society. The most affected are parents and students. How long will these increases continue? These increases come from the market place because tertiary education is connected to the world market directly or indirectly and it is affected by what the market offers (Waggaman 1991:III). But how can one co-manage and control these expenses? The survey in Waggaman (1991) conducted by Chaney and Farris revealed that financial officers were able to cut the annual rise in costs from 4,0 per cent to 0,5 per cent. Clark Kerr called this reduction "phenomenal". So it is possible to cut costs and not hurt the poorer student.
Currently there are different management approaches to control costs. Some tertiary institutions have employed various information analyses and accountability approaches to improve planning and management skills. But there is no single approach for successful management of expenditure.

There is a need to design a suitable funding formula for tertiary education. Such a formula should be flexible and should be used for budget control not for budget development. It should also be consistent amongst institutions in the country and should reflect the characteristics of local and national patterns. By designing or developing a funding formula, tertiary institutions could manage their finances more effectively and efficiently because formulas "provide an objective method" for deciding institutional requirements on equitable grounds. Formulas also decrease the possibility of strife among political parties at tertiary institutions. Formulas guarantee a substantial tolerance between public accountability and institutional independence. But critics of formulas, like Gillis and Andere (in McKeown 1986:17) believe that formulas may encourage inequities in financing among tertiary institutions that existed prior to the discovery of such formulas. Enrolment-driven formulas may not be sufficient to address the demands of a growing tertiary community and newly-created programmes. Formulas do not recognize the missions of the various institutions (McKeown 1986:69-70). Lastly, formulas do not readily take into consideration unexpected changes in expenditure and enrolment (McKeown 1986:71). Thus formulas should be used with great caution and carefully adopted to suit the mission of various tertiary institutions.

There are basic factors that should be considered in the management strategies used to control expenses. The mission of each institution should be clearly defined and priorities amongst the programmes pertaining to education, service, student affairs and administrative tasks should be set. Strategic management planning with a simple focus on the internal operations and external enrolment is imperative to establish a data base of patterns and projections about costs. The analysis of various programmes is necessary to determine which programmes are financially self-sustainable and those that need subsidies. These studies should reveal the sources from which funds could be drawn for the development of new programmes. Areas such as administration need attention to ensure procedures are followed and adhered to so that financing requests and accountability statements are accepted without any doubt. To achieve this, the strategic management plan should be in place before the next financial year or budget. By planning carefully many institutions can manage their financial resources effectively and efficiently (Waggaman 1991:V).
But many tertiary institutions believe that it is impossible to survive with all the subsidy cuts and inflation, and feel that it is difficult to remain in business. Many tertiary institutions continue to overspend on their budgets and this threatens their very existence. But with proper financial accounting and budget analysis, tertiary institutions can survive the subsidy cuts. It is true that each tertiary institution is different from the other and its management strategies are also unique. These differences are due to the uniqueness of the mission of each institution, nevertheless, it will aid the faculties and administrators if they apply proper management skills to solve their financial problems.

The most common remedy when tertiary institutions overspend is to make subsidy cuts to tertiary institutions as painless as possible. Many tertiary institutions avoid cuts in staff and reduce travel funds, photocopying and auxiliary services. If financial conditions continue to deteriorate, vacant faculty and staff positions are left unoccupied and posts for research assistants and graduates are not filled. All these steps are taken to control costs. Yet, even when they are taken, regardless of the institution’s mission, there are no guarantees that this short-term solution has any substantial effect on the long-term management of costs if tertiary institutions do not raise additional funds from private sources. On the other hand some activities can be cut to reduce the expenses of tertiary education. This could be done by looking at the importance and contribution of a course to the mission of tertiary institutions. Some activities can be financially sustainable by generating profit while others cost more than they earn, making them financially unsustainable (Waggaman 1991:xvi).

There are four categories into which an activity can be classified. The activity can be:

- important to the mission of an institution and financially sustainable
- important to the mission and financially unsustainable
- unimportant to the mission and financially sustainable
- unimportant to the mission and financially disastrous.

It is not possible to start a system of cost management without considering the mission of an institution. If the mission is known and understood it is easier to eliminate the activities which are unimportant and financially unsustainable. Problems will arise when the institution is faced with activities which are important to the mission but financially costly. Then thorough evaluation is necessary or additional funds from private donors can be sought to cover the cost of such an activity.
The need to understand the relationship between the management of finance and the mission of an institution is of paramount importance. The demand and pressure emanates from both the domestic and international arena. The challenges for the tertiary education system originate from the management of financial resources and cost control. Faced by declining financial resources and escalating expenses, tertiary education administrators have accepted the fact that they must maximize income, efficiently and effectively use resources, and minimize expenses while sustaining and uplifting the quality of academic excellence of their respective tertiary institutions (Waggaman 1991:1). The faculty administrators and staff should shoulder the responsibility of managing income and expenditure at tertiary institutions.

One of the crucial stakeholders in tertiary education is the government. Around the world the tertiary education system is regulated by the law of the country and this can either solve or create problems in institutions. The fact that most governments finance tertiary education means that many governments feel they have the right to be involved in the management of the tertiary education system. But no limits have been set to determine to what extent the government should be involved. In many instances the government wants to be less involved when it comes to issuing funds. The way the government deals with institutions on the issue of funds is of paramount importance and needs urgent attention. Many people blame tertiary institutions without due consideration of the relationship between institutions and the government which is sometimes binding by law, making management at institutions powerless.

4.3 Government and tertiary institutions

The need to have tertiary education in developing countries is part of the strategy of social and economic development. It is also aimed at increasing income distribution, improving the quality of life and eliminating poverty. But tertiary education has not yet achieved the above goals, instead it has created more inequalities. There is also widespread unemployment including unemployment amongst graduates. Yet the demand for tertiary education continues, especially in science and technology. It is the responsibility of governments to see to it that funds are available so that tertiary institutions can achieve their goals. But many governments believe otherwise and cut subsidies. Most people suggest that tertiary education should be placed on the market but given the unstable circumstances in the market place and the political climate in many developing countries, the market may not be an ideal place (Tuckman, Whalen 1980:208). The notion of full state funding of tertiary education did not find the support needed because tertiary institutions felt that the autonomy of such institutions would be threatened but Graham (in Burrup, Brimley and Garfield 1996:98) believes
otherwise and supports the idea of full state funding:

“We have witnessed an astonishing transformation in the role of the state in shaping the future of our nation. We, the state, now have more freedom to do what we know we must do. As a result of this increased flexibility, the state is free to become innovators instead of caretakers. But along with that new-found freedom comes responsibility to the citizens to lead the state and nation into the 21st century. And, to do that we must lead by example, by doing, by taking risks, by providing the impetus for change ourselves” (Burrup 1996:98-99).

From this quotation it is clear that instead of cutting subsidies, the state should be increasing its funding of tertiary institutions. But the government alone cannot cope with the increasing enrolments and aid from industry in terms of management techniques and funds are needed. Clearly there are differences. Most arguments are based on the belief that education is poorly managed and would benefit from the adoption of industrial management procedures. Many fail to be more specific about which industries or procedures could yield more efficient and effective management. The situation and environment of education and industry differ considerably. The final products differ. Students leave tertiary institutions with certificates and degrees and to use the number of graduates as the single measure of production in comparison to factory production is a gross oversimplification.

For example, an individual’s salary in a factory is based on job-performance, whereas in tertiary education teachers or lecturers work for a fixed salary. Without proper modification, the adoption of industrial techniques by education will be met with suspicion, hostility and ridicule in the education sector. Further differences are:

- The salary of staff dominates the resource list and limits flexibility. Educational institutions are engaged in long-term objectives often for years. This makes planning difficult.
- The under-development of administrative personnel can lead to planning problems. The notion of value for money in educational institutions receives little attention. All these characteristics inhibit the direct application of the factory management principle in educational institutions.

The demand to revisit the efficiency and effectiveness of government funding of tertiary institutions is becoming more urgent for several reasons. The social demand for expansion in tertiary education and the broader acceptance of the need to improve the quality of teaching and research, together with structural adjustments, decline in fiscal costs and a budget cut for tertiary education are problems facing tertiary institutions. Furthermore, tertiary education is more expensive than all other
levels of education. The changes in tertiary education funding in terms of student fees and loans and the decreasing funding role of the government are set to play an important part in deciding the continued existence of tertiary institutions, especially the government mechanism of transferring finance to core activities in tertiary education (Albrecht 1992:1). Although the direct state transfer mechanism (or the use of buffer organizations) will without a doubt still remain the main approach, it is imperative to expand and consider alternative funding mechanisms. There are basically two main approaches to be employed in funding tertiary education, that is, subsidy grants could be made directly to either the tertiary institution or the students, as is done in Chile (Albrecht 1992:22).

According to Williams (OECD 1996) tertiary institutions may be termed "service" universities that are depended upon to serve the broader demands of the society within which they exist and the government by their service to improve the economy. Williams (in Ziderman 1992:7) also views tertiary institutions running in the context of a "producer-consumer relationship", with tertiary institutions responding to students' desires pertaining to income and shortages in the labour markets. But, a market-orientated, student-interest approach may not be possible in many developing countries, particularly where the labour market is small (Ziderman 1992:7).

Tertiary institutions function within an environment that is largely regulated and controlled by the government. This sets limitations that not only affect the efficiency and effectiveness of the funding mechanism but also the allocation of these funds. In fact, it determines the incentive structure and institutional behaviour of tertiary institutions. These restrictions threaten the academic autonomy of institutions. According to Ziderman (1991:8) there are three main limitations which impact heavily on institutional behaviour. The major limitation is the government's call for more access to tertiary education, without proper adjustments in human and financial resources, to score political points. This results in over-enrolment. The government can also place restrictions on the programmes that institutions may offer, forcing institutions to admit more students into the high cost fields, which increases the financial burden on the institutions. Secondly, the government may not give institutions permission to diversify revenue therefore imposing financial dependency on tertiary education. Thirdly, the factor that government may impose restrictions on expenditure and control of the use of funds, especially on staff and academic salaries, thus threatening the autonomy of tertiary institutions.

What follows are different funding mechanisms that the governments use in tertiary education around the world.
4.4 Direct funding mechanisms

This funding mechanism by the government hinges on three criteria, namely the "payment by result" or simply the output system, that is, rewarding tertiary institutions in relation to their performance in their output of graduates and post-graduates or research. This approach will curb a high dropout rate and the repetition of courses by students. But this mechanism may result in institutions over-producing graduates who may not find employment in the labour market because directly opposite to the previous approach is the input approach. The financing to tertiary institutions in this approach is done according to the cost of tertiary education. This system uses formulas that hinge on increasing enrolments based on "unit cost".

This approach, unless well-designed, can hamper the efficient running of tertiary institutions. Increased enrolment without the necessary increase in budget may have an adverse effect on the quality of education. Many governments employ a criteria called "negotiated funding", that is, allocation based on the previous budget, sometimes increased by an across-the-board annual increment. This approach is open to abuse because the government is able to maintain a higher presence of political control of the tertiary institutions because the government controls spending and forbids tertiary institutions from seeking funds from private sources. As mentioned earlier, many countries around the world, especially developing countries, use the "negotiated budget" approach as shown in Table 1 (Albrecht 1991:10). How are negotiated budgets conducted?
Table 6: Systems for allocating resources for higher education in selected countries

<table>
<thead>
<tr>
<th>SYSTEMS FOR ALLOCATING RESOURCES FOR HIGHER EDUCATION</th>
<th>Indirect Allocations</th>
</tr>
</thead>
<tbody>
<tr>
<td>(Selected Countries)</td>
<td>Direct Allocations to Institutions</td>
</tr>
<tr>
<td></td>
<td>NEGOTIATED **</td>
</tr>
<tr>
<td>Algeria</td>
<td>Canada</td>
</tr>
<tr>
<td>Argentina</td>
<td>China</td>
</tr>
<tr>
<td>Brazil</td>
<td>* England</td>
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<td>Ghana</td>
<td>France</td>
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<td>Greece</td>
<td>Hungary</td>
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<tr>
<td>Guinea</td>
<td>Indonesia</td>
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<td>Honduras</td>
<td>* Japan</td>
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<td>* India</td>
<td>* Nigeria</td>
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<td>Italy</td>
<td>Norway</td>
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<td>* Jordan</td>
<td>* South Africa</td>
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<td>* Kenya</td>
<td>Sweden</td>
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<td>Morocco</td>
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<td>Nepal</td>
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<td>* Niger</td>
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<td>* Pakistan</td>
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<td>Peru</td>
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<td>Philippines</td>
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<td>* Sudan</td>
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<td>Tanzania</td>
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<td>Venezuela</td>
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<tr>
<td>Yemen</td>
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</tbody>
</table>

* Indicates countries that utilize a buffer funding organization
** List can be extended considerably

(Source: Albrecht 1991:22)

4.4.1 Negotiated budget

Most countries that rely on negotiated budgets also impose the highest levels of limitations on their tertiary institutions. These tertiary institutions have little or no control over their student enrolments or power to seek supplementary funds from private sources. Institutions negotiate on different points, giving them three options to choose from: namely incremental, *ad hoc* and fixed-income agreements.
4.4.2 “Ad hoc” negotiations

Negotiations take place between the representatives of the tertiary institution’s management and the relevant government ministry or financing organizations. Many Anglophone and Francophone countries have adopted this type of budget. In these negotiations the support of the government of the day, be it a dictatorship or a democracy, is very important. Those institutions that support the ruling political party have a better chance of getting the lion’s share of funds than those that support the opposition party. In “ad hoc” negotiations it is purely a political game. In South Africa the present government wants to cut subsidies to historically white institutions and increase the funding to historically black institutions, but the move can be regarded as unconstitutional because according to the new education dispensation all tertiary institutions are equal and need to be funded according to their needs and mission.

4.4.3 Incremental budgeting

This type of funding is common in Africa, South Asia and Latin America. Many developing countries employ this type of budget, with an increment that is based on the previous year’s budget of an institution. It allows the government to increase the funding to tertiary institutions, but in most instances the money falls short of the actual expenses such as the running costs and increasing enrolment (Albrecht 1991:21).

4.4.4 Fixed-income agreement

In this case, an agreement is reached between the institution and the government for a fixed percentage of the total revenue to institutions. For example, the National University in Honduras is allocated six per cent of the government’s total expenditure on tertiary education. The University of São Paolo receives eight per cent. These agreements bear no connection to the running costs of tertiary institutions and they are subject to constant changes. The fixed-income agreement seems fair but only if the government is generous and increases the revenue, but uncertainty will hang over the future of these institutions. The government has control over the finance, but still it is not in proportion with the growing number of students in tertiary education.
4.4.5 Input Financing

More countries have shifted towards input funding. In Asia and Africa, financing is allocated on the basis of estimates of the expense for educational input. There are three types of input budgeting in input financing, namely, formula, line item and programme budgeting (Tuiner 1994:139).

4.4.5.1 Formula budgeting

Formula budgeting employs formulas based on institutional data such as enrolments or staffing methods. In formula budgeting, buffer organizations allocate funds according to the cost of activities such as tuition or research. Formula budgeting may be combined with other mechanisms of budgeting like negotiated, separate allocation and historical allocations. The formula system based on enrolment has been in use in Europe, Asia and the United States.

There are two types of formulas, namely the enrolment formula in which the government funds institutions on the basis of the number of students. This type of formula budgeting can cause the number of students and staff to swell as happened in Mexico, where staff numbers expanded rapidly (Albrecht 1991:32). The basic advantage of the formula budgeting scheme is that it makes the whole administration system more transparent and reduces corruption and dissatisfaction amongst the stakeholders in the institutions because it involves all stakeholders (Turner 1994:139).

4.4.5.2 Line item budgeting

Line item budgeting implies that each item of expense should first be approved by the government. Institutions submit a budget for the coming year to the ministry of education to be approved before the expenditure is carried out. This type of budget was used in Norway and Sweden until recently. The ministry set enrolment figures and staff allocation for each department according to the budget. Time can be wasted if the system is not well-designed but if successful, it can eliminate mismanagement of funds in institutions (Albrecht 1991:33).

4.4.5.3 Programme budgeting

Programme budgeting is the brainchild of line item budgeting. Many tertiary institutions in the United States replaced line item budgeting with the programme plan budgeting system. Instead of providing funds by expense categories, such as salaries for academic staff, money is provided to cost centres
in the different faculties. For example, budgets are allocated to individual professors in Germany. Control suffers and funds can be mismanaged in this system. However, this type of budgeting allows institutions to be more flexible in allocating their internal budgets (Albrecht 1991:33).

4.4.6 **Output financing**

This type of funding may encourage high unit costs and may lead to the over-production of graduates. The main driving force behind governments developing the output financing approach has been the high cost of producing graduates because of institutional ineffectiveness, inefficiency or the poor performance of students through the system. Output financing provides a way of preventing the mismanagement of funds. In many countries, government control has not been conducive to reaching these objectives owing to the automatic admission of students without the necessary measures or funds to counter over-enrolment.

4.4.7 **Student-based financing**

Another approach to funding is student-based financing, that is, the student receives the money in the form of a voucher, based funding is the voucher financing system. Student-based funding techniques encourage competition, which in turn stimulates quality, effectiveness and efficiency. Competition in tertiary education would encourage students to compete for support and tertiary education institutions would in turn compete for students (Albrecht 1991:45). The reform in the United Kingdom system of tertiary education is a good example of this student-based competitive strategy. Students compete for aid by satisfying strict academic requirements for admission to tertiary education. On satisfying those requirements, they are ensured free tuition. Maintenance subsidies are allocated according to need, rather than on merit. Institutions are bidding for funds, which requires them to compete for students. Tertiary institutions set the cost at which they will accept more students in proposed fields and register a bid. If the bid is approved, they are forced to fulfil the bid.

Chile is another example of a country where student-based funding has been put into practice but not without problems (see Table 6). Firstly, there was a drop in academic standards because students enter tertiary institutions for vouchers, not for diplomas. The second problem is that graduates cannot find suitable jobs because there are no jobs for graduates. Thirdly, the voucher system could fund expensive science and technology programmes. Besides, there is no control on
the expenditure of students, so many used the vouchers for family expenses rather than on their studies (Albrecht 1991:49).

4.5 Lessons from financial markets

The shift towards a market-orientated model of higher education has not gained the necessary support among the various stakeholders. However, there is a relaxation of the relationship between the state and institutions in the developed countries, such as the United Kingdom and the United States of America where the autonomy of institutions is respected. It is imperative for tertiary institutions to borrow techniques from financial companies and use them to solve financial problems in tertiary education. Large tertiary institutions with huge financial assets and liabilities should borrow techniques from financial organizations because this could save them millions of rands. Tertiary institutions should also move towards employing professionals to balance their books and run the finances (Anderson and Meyerson 1990:57).

Presently, institutions are affected by global markets and there is a need for administrators and management to keep pace with developments in international markets. As part of the economy of their respective countries, tertiary institutions should prepare for a decade or more of limited financial resources and potentially weak economies. Administrators should also evaluate the specific exposure of their institutions to economic roles. For administrators to guard against these risks, careful financial planning is necessary. Planning is an important function of every organization because resources are fundamental to every activity and financial planning guarantees substantial improvements. Financial planning is the heart of tertiary institutions as with any other business enterprise and needs no emphasis, considering the environment and the circumstances under which they operate. It is imperative that tertiary institutions plan for long-term and short-term financial objectives (Anderson and Meyerson 1990:23).

4.6 Financial planning in tertiary institutions

The most important function of management in any organization is planning. Planning implies making decisions in advance on what to do, how to do it and when to do it. According to Hunt (in Hunt, et al, 1997:2) planning is a managerial phenomenon which involves determining an institution’s basic mission. It involves every aspect of a manager’s function which includes making decisions on an organization’s financial position. Financial management is made up of financial planning, financial organization and control. In tertiary education financial planning implies the process with which
tertiary institutions create a long-term vision, aim and objective, the identification and assessment of alternatives and the selection of alternatives (Rao and Romana 1996:201).

Walker and Baugham (in Rao 1996:202) cite four important steps in financial planning, namely the creation of objectives, the formulation of financial policies, forecasting and the formulation of procedures to be followed. The objectives and mission, as mentioned earlier, may differ amongst institutions, but all institutions work towards improving the quality of life in society. Whatever the mission and objectives, commercial or service-based tertiary institutions are expected to manage their finances efficiently and effectively in order to reach these goals. Many tertiary institutions around the world, including South Africa and India, show signs of being unable to set clear goals or objectives. There is an absence of short-term and long-term plans, clear priorities, of procedures, methods and systems (Rao 1996:202).

4.6.1 Budgeting

Budgeting is a management technique employed for financial control and planning. Depending on the character of the institution, a budget may be created for weeks, months, five years or ten years. The main aims of a budget are (Rao 1996:202):

- a realistic estimate of income and expenditure for a prescribed period
- a co-ordinated financial plan of action determined to accomplish the estimates indicated in the budget
- a comparison of real results with those planned and an analysis and interpretation of deviations to show the course of remedial action and to lead to improvement in procedures in establishing future budgets
- a framework for management decision in adopting plans
- a guide to management in making daily decisions
- a method for motivating the consideration of profit-planning.

Tertiary institutions are not different from commercial enterprises when it comes to budget objectives. The budget process is made up of the following steps (Rao 1996:203):
• Setting guidelines
• Preparation of estimated expenditure
• Format of budget
• Approval of budget
• Implementation and evaluation.

Below is a brief financial analysis according to the “Budget process Steps” of two Indian Universities, Hyderabad and Nagarjuna (Rao 1996:205). India has one of the biggest tertiary education systems in the world, so if India can solve its financial problems, then South Africa can learn some valuable lessons.

4.6.1.1 Setting guidelines

Both universities lack a set of guidelines. The only guidelines they have relate to estimates of receipts and payments and the format of the budget.

4.6.1.2 Preparation of estimated expenditure

In many countries, just as in India, funds are allocated by the central government through buffer organizations, such as the University Grants Commission (UGC). The institution’s management and the UGC negotiate the amount of subsidies to be granted to the university. Institutions first have to determine their receipts from private sources such as students, examinations and self-sustaining departments and make a claim on the difference of estimated costs for the years under negotiation. The UGC has the final say on the amount claimed. At Nagarjuna University, maintenance grants are determined by the state government. In Andhra Pradesh, the council of Higher Education was established to determine maintenance grants for tertiary institutions. This is done for a five-year period with a yearly increment of 5 per cent – 10 per cent to counter any increase due to inflation (Rao 1996:205).

Nagarjuna University has more than 100 college affiliates. The fees collected from examinations are substantial but considering their enrolments, salaries, teaching, research and libraries, expenditure is not promising because of over-enrolment. From the above information, the following points are clear:
• Both tertiary institutions are struggling financially because the grants are decided by the UGC or state government. They have no substantial say in the final decision concerning grants.
• In the case of Nagarjuna University, the amount is based on the previous year's enrolment and the university has no say in this process.
• There is a lack of a systematized assessment of the cost on an "item-by-item individual basis" (Rao 1996:205).
• There are no budget objectives.
• The procedure for implementing the budget is inadequate; there is no funding mechanism. There is no control on expenditure and there is no spending plan.
• The budget format is not done by institutions but by the UGC with limitations.
• An office to scrutinize the budget exists at Hyderabad University but not at Nagarjuna University (Rao 1996:209-210).

Many colleges and universities face the same predicament as Nagarjuna University and Hyderabad University and continue to search for a way to best manage the complexities in financial management specifically and management in general. The search has led many tertiary institutions to “Total Quality Management” (TQM) (Howard 1996:17).

4.7 Total Quality Management

As financial problems in tertiary institutions persist, many institutions are looking for a solution in the business world, not only financial solutions, but solutions relating to the knowledge and skills that these business sectors use to manage their companies. One of the most well-known approaches is the Total Quality Management (TQM). Total Quality Management offers some hope in tertiary education because of its success in the private sector. Total Quality Management relies on the participation of all employees in the continuous improvement of organizational management.

The tertiary education system faces criticism from both parents and students, all of whom anticipate improvements to the quality of learning. Expectations from the public are high and public trust is waning. With changing campus customers, tertiary education faces huge challenges in serving the needs of different groups of customers. With increasing enrolments and declining subsidies tertiary education needs to be saved. Applying TQM to tertiary education is not without its problems. Maybe the greatest problem is adapting TQM's company management philosophy to a tertiary education context. The first barrier is the terminology of the corporate world in TQM, terms such as “Kaizen”, "bench marking" and “cause-and-effect diagram" will not be easily transferred to higher education.
The organizational culture between higher education and the corporate world differs. The latter is hierarchical while the former is more democratic (Holmes 1996:35).

What can TQM do to alleviate the financial problems facing tertiary institutions? Quality in administration can improve the financial aid process in student affairs. Using flow charts and other tools of TQM, the time applications take to be processed can be reduced. The mission and objectives of tertiary institutions can be reached successfully, the cost of unnecessary functions can be reduced. The efficient processing of data can help management to make better decisions concerning finance. Financial goals could be achieved through strategic planning, using total quality management tools such as pareto charts, which can be used to identify prominent financial problems such as self-sustainability of courses, that is courses that brought in sufficient money and need less subsidy. Flow charts can be used to identify duplication in courses and corruption and malpractices in the administration and control of funds. These are the two total quality management tools that can be used in tertiary education to improve the effectiveness and efficiency of financial management.

Though there is one commonly accepted definition of TQM, most definitions stress widespread, extensive participation from everyone in the institution. This approach can be used in individual student affairs departments even if the whole institution does not accept TQM (Howard 1996:25). Total quality management also emphasizes continuous which that tertiary education financial need to undergo staff development continuously to able to deal with new financial problem. Staff development will improve effectiveness and efficiency in the administration and control of finance in tertiary education (Sher 1991:10).

The tertiary education system has a number of clients to consider when planning, such as the government, parents, students and the private sector. The major clients of tertiary education are government and the private sector as both employ graduates from tertiary institutions. For the country to participate competitively in the global market, the needs of the world market should be satisfied. There should be the creation of a skilled work force and tertiary institutions should provide it. The graduates produced by these institutions should be relevant to the needs of the economy of the country, that is, tertiary institutions should produce graduates in the fields that are of importance to the economy. There is no use in producing graduates in fields that are not desirable in the economy. TQM principles can also attract additional funds from the private sector by identifying the needs and interests of the private sector. What the private sector needs is important and if tertiary institutions could realize the needs of private donors, it would not be difficult to attract these funds. This can also help the alliance between the corporate world and tertiary education institutions. The
British and United States tertiary system has benefited a great deal from such alliances (as mentioned in Chapter 3).

Total Quality Management in tertiary education can make a difference in solving problems, depending on the nature of the problem. What TQM demands from all stakeholders are commitments. The commitment to work together to solve the financial problems facing tertiary institutions. As for subsidy cuts in tertiary education, institutions should establish what donors, alumni, the private sector and the public need and use this information to acquire funds. The needs of these donors should be judged against the mission and objectives of the institutions to avoid the institutions being driven by donors. The institution should retain its autonomy even in the face of the TQM approach. Furthermore TQM requires financial administrators to use the system approach in their operations – the plan-do-check-act (PDCA) because it is a scientific method for continuous improvement. In Plan the process that needs improvement is identified and a proposal for change is needed. In Do proposed changes are implemented. In Check, check through data if the test or experiment produced the required changes. In Act implement the idea more broadly if the experiment is successful. If unsuccessful, learn from errors and attempt option B, plan or alternative.

4.8 Coping with declining resources

The first line of defence against declining financial resources is to campaign for additional resources by fundraising and investment. In fundraising, tertiary institutions should engage all stakeholders namely parents, private donors, alumni, non-alumni individuals, non-alumni graduates, corporations and foundations. Fundraising is expensive and needs thorough planning, but the fundraising can raise money more quickly than investments. Investment by tertiary institutions in the global market should be done with the assistance of economists because of the unstable situation of the market.

Tertiary institutions can plan and reallocate financial resources. This includes amongst other things, the reviewing of aims, objectives and the mission of tertiary institutions, the introduction of monitoring systems to evaluate institutional financial activities and the establishment of long-range planning. To assess programmes the following criteria can be employed (Alfred 1978:48):
• What is the aim of the course?
• When was the course started and for what reason?
• What is its development and growth record?
• Can the course be operated cost-effectively?
• Can it be combined with other courses?
• Can it be altered or redesigned to provide a greater service?
• Can it be improved to cater better for upcoming requirements? (Alfred 1978:48)

This organizational analysis technique can help in the restructuring of courses and reduce expenditure if applied properly and timeously.

Other approaches to cope with reduced financial resources are strategic pruning and grafting which includes reducing and combining courses, which can result in institutions attracting more funds from the private sector and individual donors (Alfred 1978:49).

When pruning and grafting, the following guidelines should be followed (Alfred 1978:58):

• **Guide by priorities.** All courses whether new or old should be assessed on the same priority list.
• **Maintain excellence.** The support and enrolment of an institution hinges on excellence and quality.
• **Prevent competition.** This implies that competition with other institutions pertaining to courses should be avoided in order to prevent duplication.
• **Support what exists.** Courses should be offered greater consideration when they supplement or support the existing courses, for example short-period skills training courses for community services.
• **View cost and benefits.** Courses with low benefit and high cost should be replaced by courses with high cost and vital benefits, but later can fall within the area of cuts.
• **Strive to generate additional funds.** Courses that are able to attract more funds are a greater help in assisting the development of new courses.
• **View carefully enrolment patterns.** Reduced resources imply fewer enrolments. Many tertiary institutions have seen an expansion in career courses while enrolment in transfer courses declined. Enrolment can therefore assist in predicting where budget cuts can be implemented.
• To save scarce resources of tertiary institutions employ part-time lecturers in increasing numbers. Part-time lecturers can be employed at half the salary but still teach as many students as full-time lecturers. This has led to many tertiary institutions hiring part-time lecturers. This approach needs thorough planning because the part-time lecturers leave the full-time loaded with work as most of the time they are not with students.

• Reduce staff. Other institutions resort to reducing staff in their institutions by leaving the posts unoccupied, terminating part-time lecturers, encouraging early retirement and applying payment by performance (Alfred 1978:50).

The success of these measures to cope with reduced financial resources depends solely on the management and administrative skills of tertiary education institutions.

4.9 Conclusion

The problem facing the tertiary education system in South Africa and around the world cannot be solved by violence and the destruction of property by students, but by planning and control using proper techniques and involving all stakeholders. The ever-increasing enrolment and the declining subsidies in tertiary education compel institutions to seek additional funds and they should be allowed to do so without interference from government. The government should grant institutions the necessary resources to acquire and plan their finances according to the mission of the institution. The government should not use tertiary education for political aims but should rather employ buffer organizations to fund tertiary institutions than engage in a negotiated budget. South Africa needs such a body to fund tertiary education.

The need for economic prosperity in many countries around the globe compels many to adopt new approaches. Many tertiary institutions apply Total Quality Management principles directly or indirectly in their management. This approach, borrowed from the corporate world, could change the face of tertiary institutions if applied properly. The chaos in tertiary education in South Africa may be eliminated by applying TQM in the sense that South Africa should look at what the world market or global economy requires and make changes according to the needs of this complex, technological world.

To introduce necessary changes to tertiary education management requires those in leadership to acquire management and administrative skills to enable them to deal effectively and efficiently with the problem facing tertiary institutions. Short-range management styles should be replaced by long-
range management styles that ensure the growth and development of tertiary institutions. The expenditure on personnel should be reviewed and where necessary be cut. Benefits such as entertainment could be cut. The curricula and courses should be reviewed and changed to be in line with the needs of the community at large and the country as a whole. Zero budgeting should be introduced to ensure transparency and fairness in funding tertiary institutions. Accountability, quality and fair competition should be encouraged and promoted by all stakeholders.

4.10 Summary

With all these financial problems facing tertiary institutions, one should not despair because there are examples from the international arena that prove that tertiary institutions can be sustainable and able to attract funds from the private sector or raise funds themselves. What is needed is thorough planning and control in management, without compromising academic standards and quality of tertiary education.

There are various techniques and methods or approaches that can be employed to counter government subsidy cuts rather than the exclusion of students from courses or retrenchments of academic staff.

Many institutions can cope with the declining financial resources if they implement techniques that ensure growth, quality, efficiency and effectiveness in their management. The adoption of business techniques in tertiary education can be very beneficial also, but should be implemented with greater caution because these can determine the success and failures of the mission of tertiary institutions. All these should be backed by visionary, accountable and dynamic leadership which will ensure the participation of all stakeholders.

In the final chapter (5) there will be a summary of the whole study, recommendations and concluding remarks.
CHAPTER 5

CONCLUSIONS AND RECOMMENDATIONS FOR THE SOUTH AFRICAN TERTIARY EDUCATION SYSTEM
5.1 Introduction

The expenditure on tertiary education in South Africa is still high compared to that in many countries around the world. This is due to inter alia over-enrolment in tertiary institutions. Increasing enrolment will not stop in the next millenium. The financial problems of tertiary education in South Africa are evident but the solutions to these problems are still elusive. After four years in the new South Africa, tertiary institutions are still racially divided. Poverty is still the main obstacle that bars students from disadvantaged backgrounds from entering tertiary institutions. Traditionally white tertiary institutions are still better equipped than traditionally black institutions. Tertiary education in South Africa is still elitist and many graduates cannot be absorbed by the job market. This means that these institutions are increasing unemployment.

The funding mechanisms that are supposed to assist the poor financially have not helped all the needy students because of a lack of funds. Many students are excluded from tertiary institutions for financial reasons. Tertiary education funding of South Africa is aimed at deserving or gifted poor students. What about the majority of students who cannot gain entry into the university because of poor performance, that is, those who pass grade 12 without exemption (university entrance pass)?

The debt owed to tertiary institutions is increasing yearly while the expenditure on tertiary education compared to primary and secondary education is also increasing rapidly. Many students will be left out because of their socio-economic conditions. In fact, the cost gap between primary and tertiary education is tenfold. The government wants to cut subsidies which will make tertiary education way beyond the reach of poor people.

Formerly white tertiary institutions do not suffer to the same degree as formerly black institutions because they are preferred by large corporations and business because of good management and less corruption. The same thing cannot be said about the formerly black institutions. Many of the latter are facing closure if money is not available because of past mismanagement of finance and corruption.

Over-enrolment also has financial implications for all tertiary institutions. This is also experienced more by formerly black institutions. This over-enrolment has led to over-production of graduates who owe large sums to institutions but who cannot find employment in the civil service or industries because of staff cuts and retrenchments. How will they pay if they cannot find employment? The very nature of their qualifications often leads them into
this predicament because the majority of graduates have spent large sums of money on courses or programmes in the humanities which are not marketable, while other more marketable fields such as technology, are not fully explored.

There is a need for tertiary institutions to focus on what is needed in the market economy. Our tertiary institutions should be need-driven, that is, courses should be designed according to the national needs or requirements of the country. Using these criteria, one will find that many tertiary institutions are still serving ethnic needs. Many black universities are still mainly black and white universities are still mainly white with few black faces. This has nothing directly to do with finance, but when one considers the racial clashes and the damage caused by these conflicts one realizes that there are financial implications, that is, repairs and replacement of destroyed equipment. Many South African institutions have experienced such damage that has cost millions of rands. Many institutions have not fully recovered from this damage. The buildings of many South African tertiary institutions are also old and need to be upgraded or renovated. South African tertiary institutions also need to be expanded to accommodate the masses, especially the formerly white institutions. All these factors put pressure on the financial resources of South African tertiary institutions.

5.2 Summary

Many bursary schemes in South Africa, such as Tertiary Education Funding of South Africa (TEFSA), have not fully addressed the question of how to assist poor students. The funds donated to TEFSA are not sufficient to assist all needy students. Each year over 100,000 students are added to the list that TEFSA has. The question of sustainability of TEFSA creates further problems because the government has other social responsibilities to fulfil.

There is also the issue of the criteria that each institution uses to determine the eligibility of needy students. Each institution conducts and designs its own means-test, which implies that some institutions could use a very lax system to accommodate their well-to-do relatives and cousins. There should be one set of criteria which is applied nationally to determine a student's eligibility for assistance.

The old funding mechanism to tertiary institutions by the government is complex and complicated because it was racially based and discriminated against formerly black institutions. Many believe that formerly white tertiary institutions who receive less funding while formerly black tertiary institutions who receive more, will address the financial problems of tertiary education. Even if the latter were to receive more money, the
infrastructure is more advanced and the equipment is better at formerly white tertiary institutions. It will take time and a great deal more money to bring formerly black institutions up to the same level of white institutions.

Another factor that warrants attention is staff development. It would be wrong to put money into tertiary institutions without staff development. The training of administrators and managers in financial management is necessary and needs to be addressed fully. The corruption experienced at some black tertiary institutions bears testimony to the need for expertise in the administration and control of finances. Strong student activism in tertiary institutions can lead to the lowering of academic standards in South Africa. Student activism is a major stumbling block towards achieving "total" repayment. Many officials are more concerned about keeping their posts rather than ensuring that the money owed is repaid. Poor information system management may also lead to unsuccessful collection of debt because of information on students being unavailable or lost.

Over-enrolment can also lead to the 'lowering' of or 'a drop in' academic standards in the institutions because lecturers will be overloaded or overworked. Those who employ such graduates will experience a drop in production. So there is a need to improve capacity and employ more lecturers and administrative staff for students entering tertiary education.

The loan schemes in South Africa are not popular with students because most parents want to pay for their children and students themselves are not keen to start working with a huge debt on their shoulders. For many students from poor backgrounds, a student loan can have an adverse effect and can lead to students not being willing to take loans. What is best for poor students, a loan or a free grant? Many parents and students know very little about loans and grants or investment in education. There is a need to educate both parents and students, especially in rural areas, about the need to invest in their children's education.

By subsidy cuts the government wants to move tertiary education from a social welfare model of funding to a market-orientated model, which does not favour poor students because the poor who cannot achieve maximum points will be excluded. As a result the neediest students will be unable to find TEFSA aid. There should be a mixture of private and public institutions. There should be a funding programme for the poorest of the poor.

Having mentioned these problems in the tertiary education system in South Africa, one has to make it clear that some of these problems are not unique to South African tertiary institutions but are widespread around the globe, creating a crisis even in developed
countries such as the United Kingdom (UK) and the United States of America (USA), for example the problem of poor students and default in payment of fees. The UK, USA and Australia are also struggling to find the right formula or mechanism to fund tertiary education in the face of growing social responsibility. Default in Australia is about Aus $4 million. Tertiary education in the USA costs the taxpayer about US $3 billion a year. Because of their strong economies, they are better off than the developing countries and the underdeveloped countries in Africa (Wilson 1996:119 and Jacquin 1995:33).

The word "redress" (of past imbalances) has dominated centre stage in the tertiary education community. Many believe that formerly white institutions should receive little assistance from the government and black institutions should receive higher subsidies. This is simply another form of discrimination. On the other hand, it is true that some of the black institutions are more poorly managed than formerly white institutions and the corruption level at the former is too high. Student debt is also high in black institutions. It is not right to pour money into institutions that cannot account for every cent. Tertiary institutions which cannot recover money from their former students should be integrated into better-run institutions so that the money should be redirected to expand the effectively-run tertiary institutions.

Fund-raising is a major source of additional revenue in countries like the United States of America. Research universities have dominated fund-raising because of contracts with industries. Public institutions in the United States of America are raising large sums of money. English universities such as Warwick have also raised large sums of money.

In South Africa, many tertiary institutions receive private revenue from donors, especially overseas governments and charity organizations. Very little in fund-raising is done in tertiary institutions, especially in formerly black institutions. Many tertiary institutions in South Africa, as in most countries around the world, respond to subsidy cuts by increasing tuition fees. There is great discontent concerning tuition fee increases in South Africa. It has led to disturbances at campuses around the country, resulting in damage to property, injuries and loss of study time with serious financial implications.

Tertiary institutions can also try to implement private business practices such as total quality management to ensure flexibility, efficiency, productivity and competitiveness. Borrowing business practices is popular in private tertiary institutions around the world. In South Africa very little has been done in this regard (Holmes 1996:35).
Banks in South Africa have become more selective in giving financial aid to students. Many emphasise high performance and the courses students want to study. Many banks favour students in commerce above arts students. Banks such as Standard, Nedbank and Amalgamated Banks of South Africa (ABSA) charge high interest on loans. The motive behind the financial support to students is to attract future high-earning clients to the banks, but there are problems. Many students change banks after graduation. Some students use the loan for private, personal interests such as holidays, buying a car or a house. There is very little supervision or monitoring of expenditure. All these banks require insurance for a loan. As a result, many poor students do not have security, therefore cannot secure a loan. A solution should be found to enable poor students to secure loans otherwise the demand for greater access to higher education will be an empty dream. The government should provide security for deserving poor students and urge the banks to charge low interest on student loans or relax the strict laws on loans.

5.3 Recommendations

In conclusion I would like to make the following recommendations for improvement and change in the South African tertiary education system with a view to solving the present tertiary education system problems, especially those pertaining to the funding of tertiary institutions:

- Tertiary education in South Africa is united in theory but in reality it is still divided, that is, black institutions are still mainly black and white institutions are mainly white. The best solution is integration of all tertiary institutions. There are too many universities. Those that cannot sustain themselves or are poor managed, should become community colleges affiliated to universities. There should be bigger, but fewer, universities that will produce quality graduates. (See 3.1)

- Tertiary institutions in South Africa should realize that they cannot afford to be all things to all people in society any longer. Institutions should embark on strategies driven by a clear mission. They should limit their programmes according to their missions, ensure effective management and control of financial resources. In short, there should be a move towards specialization which will enhance quality and a competitive spirit in tertiary institutions. (See 4.2)
• With subsidy cuts facing many tertiary institutions, they have had to seek additional funds from private sources. Tertiary institutions should adapt and learn to respond positively to reduced government funding by introducing changes in their academic programmes, ensure effective leadership in expenditure control and management of the budget, the re-organization and redefining of methods of conducting business, that is, adopt market-orientated models. Monitoring of expenses is one of the most effective measures to reduce unnecessary expenditure. Programmes can be reduced by evaluating them against their relation to the mission of the institution and their ability to sustain themselves financially. New programmes can be designed or developed from uniting different programmes. (See 4.8)

• Human resources in tertiary institutions should be developed and improved by means of staff development programmes to ensure effective and efficient management of financial resources. (See 3.6 and 3.11)

• Since the government cannot fund tertiary education alone, a graduate tax should be paid by every graduate holding a degree, who earns more than R50 000 per year. All stakeholders hiring graduates should also pay a graduate tax. This will ensure the sustainability of funding organizations such as TEFSA and reduce government expenditure on tertiary education. (See 3.7)

• Parents and other stakeholders interested in tertiary education should be educated on how to save money for tertiary education for their children. (See 3.10)

• The identification (or means testing) of prospective deserving poor students should be done within the national policy framework in order to ensure fairness and guarantee that those who get help are the most needy. A scholarship or bursaries for non-gifted students from poor families should be introduced. A programme should be introduced to identify such students in secondary schools. (See 3.7)

• A strong “buffer” organization should be introduced to allocate funds to tertiary institutions. Each institution should submit its proposed budget to the buffer organization to be approved before the end of the last term of the year. If unforeseen problems concerning enrolment surface, tertiary institutions may apply for additional funds from the organization. The additional grants will be made in the form of a loan to the institutions. (See 3.4)
• Tertiary institutions may raise money from private donors provided such donors do not attach conditions that will be in conflict with the constitution, the policy of the education system or the mission of the institution. (See 3.8)

• An independent, qualified accountant should be hired on a contract basis to monitor the expenditure and income of tertiary institutions. The independent monitor should also give advice on investments and fund-raising. This will ensure effective management of financial resources in tertiary institutions. (See 2.7.4)

• Students who study at universities for more than the required number of years should be transferred to distance education institutions or their studies at the universities should be terminated to reduce costs and give others a chance. (See 2.7.4)

• The South African tertiary education system should adopt a market-orientated model and move from the social welfare model to ensure effective and efficient management of finances. (See 4.7)

• Tertiary education institutions should be funded according to their needs and not according to their historical background. Increasing funding to historically black institutions and cutting funding to formerly white institutions would be unconstitutional. All tertiary institutions belong to all South Africans, black or white, and should be integrated into a single coordinated system that will be cost-effective. (See 3.6)

• The financial resources, facilities for tertiary education and human resources should be equally divided amongst the provinces and each province should have a university, technikon and college. To reduce the costs of tertiary education, student movement from one institution to another should be regulated on admission basis and after graduation, as that students in Gauteng, for example, should enrol in institutions in the province. Many graduates leave their provinces to go and live in other provinces leaving some provinces with a shortage and others with an excess of graduates. The provinces lose money because of such graduates. (See 3.7)

• TEFSA and other student loan organizations should establish offices in all nine provinces to administer the granting of loans. Loans, grants and scholarships should be administered by one organization. (See 3.4)
• Closer cooperation between tertiary institutions and industry should be developed to encourage industry to support tertiary institutions financially as well as with skills and knowledge as in the case of Warwick University in Britain. (See 2.4.2.2)

• Measures to cope with reduced financial resources should be implemented in tertiary institutions which are seriously affected. Measures such as better planning, reallocation of funds, pruning of programmes or redesigning should be implemented rather than retrenchment and closure of institutions. (See 4.6.1)

• Tertiary institutions need effective leadership and management to deal with reduced or declining financial resources. (See 4.9)

• The information system of tertiary institutions should be upgraded to assist in the recovery of student debt. Private companies should be hired to collect the debt where possible. Payroll tax should be introduced to all graduates in South Africa to ensure sustainability of student support organizations like TEFSA. (See 2.6.4.1 and 3.4.13)

• The establishment of private tertiary institutions in South Africa should be regulated by Government to protect students from exploitation. (See 2.1 and 2.6.5)

• Poor students should be financially assisted as far as a first degree and for postgraduate studies, income contingent schemes should be implemented on condition that students should start repaying once they are employed and earn above the average salary determined by the Minister of Education, who will take into consideration the inflation rate. (See 2.5.4.2)

• Integration of formerly white tertiary institutions and formerly black tertiary institutions is necessary to cut unnecessary expenditure. Accommodation and meals should be privatized. Buildings formerly occupied by students for accommodation should make way for the expansion of tertiary institutions. That is, they should make way for additional lecture halls in formerly white universities in order to accommodate more students. Tertiary institutions which cannot be integrated should be turned into community colleges such as two-year community colleges, diploma or certificate colleges with open admissions. Universities should offer degrees at undergraduate and post-graduate level only. Community colleges should offer diplomas and certificates to avoid overcrowding at universities. (See 1.2)
Some recommendations may be difficult to implement and others may have already been implemented. They are all the findings of this research and should be considered for further research in tertiary education.

5.4 Concluding remarks

The present financial problems in tertiary education may have roots in Apartheid, but the solution will not be found in blaming the apartheid system, because the system does not exist any more. The solution lies in the involvement and commitment of all stakeholders (black or white), who must strive towards the building of a new tertiary education community with new a set of rules that will not discriminate but reconcile and work toward better financial management at tertiary institutions.

The main causes of problems are not only financial resources. Mismanagement and corruption in the financial sector of tertiary institutions need to be addressed. One cannot put money into a system that does not function properly with no prospect of financial accountability or responsibility. The journey towards acceptable solutions needs total commitment, putting aside our cultural diversities or personal ambitions and move towards the future as one tertiary education society in the spirit of peace and the fight against poverty amongst South Africans. "If tertiary education is too expensive, try ignorance" ([s.n.] [s.a.]).
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