UNIVERSITY OF STIRLING

DEPARTMENT OF FILM AND MEDIA STUDIES

# DISTANCE EDUCATION SYSTEMS AT THE TERTIARY LEVEL:

## WITH SPECIAL REFERENCE TO STRATEGIES DEVELOPED FOR PART-TIME UNIVERSITY STUDENTS IN ZIMBABWE

THESIS SUBMITTED IN FULFILMENT OF THE REQUIREMENTS FOR THE DEGREE OF DOCTOR OF PHILOSOPHY

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# DEDICATION

**In loving memory of my little brother Themba and my father Khumbula. Put together, the names Khumbula and Themba mean Remember and Hope.**

## Acknowledgements

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# LIST OF ACRONYMS AND ABBREVIATIONS

ALOZ  Adult literacy organisation of Zimbabwe

AVS   Audio Visual Services

CAL   Computer assisted learning

CCOL  Commonwealth Cooperation into Open Learning

CDE   Centre of Distance Education

CET   Centre for Educational Technology

CML   Computer managed learning

COSU  Correspondence and Open Studies Unit

COSIT Correspondence and Open Studies Institute

DE    Distance Education

EBI   Educational Broadcasting International

KIPU  The Knowledge is Power University

MED   Media in Education and Development

NDP   National Development Plan

OL    Open Learning

OUUK  Open University of the United Kingdom

SADCC Southern Africa Development Coordination Conference

T1    Three-year secondary school teachers' certificate

T2 A  Two-year secondary school teachers' certificate (academic)

T2 B  Two-year secondary school teachers' certificate (practical subjects)

T3    Three-year primary teachers' certificate

PTH   Primary teachers higher certificate

PTL   Primary teachers' lower certificate

UATS  Unified African Teaching Service

UDI   Unilateral declaration of independence

UJC    University Junior Certificate ( offered by UNISA)

UNED   The Universidad Estatal a Distancia Costa Rica

UNISA  University of South Africa

UZ     University of Zimbabwe

ZANU   Zimbabwe African National Union

ZAPU   Zimbabwe African People's Union

ZIDE   Zimbabwe Institute of Distance Education

ZFE    Zentrum fur Fernstudienentwicklung

ZIFF   Zentrales Institut fur Fernstudienforschung

Zim Sci Zimbabwe Science project

ZINTEC Zimbabwe Integrated  National Teacher Education Course

# ABSTRACT

There are a wide variety of tertiary level distance education systems, but the fundamental principles are the same: namely that the learner and the instructor must be apart most of the time; that some form of media must be used for communication; there should be provision for student support and occasional face-to-face contact and that there must be an organisation offering instruction.

The distance education system can be split into several subsystems depending on need. Three root elements are sometimes perceived: the administration subsystem, the course development subsystem and the student support subsystem.

Distance education (DE) students face many problems. The major one is the feeling of social isolation, which can be minimised if the student interacts with other people. Some students are more capable of coping with distance education than others. Emotional, motivational and learning problems appear to be the same cross-culturally. There are however differences inter-culturally between students, in the availability and use of media. These differences may be more economical than cultural. All DE students are agreed that books constitute the most effective medium for them to succeed in their studies. This makes an understanding of existing communications infrastructure vital in distance education provision.

Many countries are adopting distance education because of pressure on university places. Zimbabwe is currently facing an enormous problem, which is further aggravated by the country's colonial history. The University of Zimbabwe has attempted to respond to this pressure by extending its part-time programme. However, very little is known about part-time students and their problems at the UZ. The issues some of these students raise are a cause for grave concern. Immediate action needs to be taken and several proposals have been made. Specific recommendations are that:

- communication between staff and distance education students must be improved;
- key books must be available to students at appropriate times;
- all students must be accommodated by the university during residential periods;
- more effective use should be made of available media;
- costing of courses must be rationalised and standardised;

The study also has important implications: for the design of multi-media distance education systems in general; for selection and the use of media; for student support; for cross-cultural differences; and for regional and international cooperation. Four options for the improvement and expansion of DE at the University of Zimbabwe and in Zimbabwe in general are discussed. These are:

- in the short term, the improvement of current provision;
- in the medium term, dual mode (e.g. a Centre for Distance Education) at the UZ;

.   in   the   long term,   dual mode (e.g.   Institute of   Distance
Education) in a new institution;

.   a   Zimbabwean Open University;

PART I.

# PART I

CHAPTER ONE

INTRODUCTION

Distance education has now been accepted as an important method of educational provision at the tertiary level. There are many institutions all over the world which teach only or mainly at a distance. Traditional universities have been quick to adapt the method for their own purposes by using the dual mode. In the last decade, distance education (DE) has also become a study discipline in its own right, Holmberg, (1986). As a study discipline, it has contributed to the understanding of how adults live and learn in social isolation.

An attempt to understand how students learn, leads one to question the socio-economic structure in which they live. Further questions arise about their historico-cultural background, and their current and future state of the quality of their lives. There cannot be any DE system without communications infrastructure, thus any serious study of distance education must also examine communications.

DE students learn away from the source of instruction and are therefore isolated. Learning in social isolation is percieved as being very difficult. Distance educators have concerned themselves with this issue over a long period of time. It is clear that evidence from learning theory in general should be

taken into account, when structuring learning materials.

This leads one to perceive distance education as part of a wider socio-economic framework, as it cannot survive in isolation. Designing DE systems can never be seen as separate from the wider political issues and development. We seek to develop these concepts further in the following pages.

A distance education solution in Zimbabwe?:

The socio-economic problems facing Zimbabwe at the moment are a classic example of the issues facing the developing world in general as can be summarised from Williams, (1984). He cites the following issues:

- rapid population growth
- unemployment (wide-scale youth unemployment)
- lack of foreign currency
- rising unit costs and inflation
- demand outstrips supply of school places
- deteriorating library resources
- limited college and university places
- erosion of public confidence and low morale by teachers etc.

It has been shown that education is a vital means for reducing or even redressing some of these problems. Hawes and Coombe, (1986) for example, provide evidence of a negative correlation between population growth and the amount of education the female population gets. The more education, the fewer children the women will have.

In Zimbabwe there is universal primary education, which virtually guarantees a primary school place for every child. About 80% of primary school leavers find their way into secondary school education, but less than 5% of secondary school graduates go to

fifth and sixth form and colleges. Even fewer get to university.
The Zimbabwean public is demanding more university places for its
youth. The University of Zimbabwe (UZ) has responded by expanding
its part-time programmes. In 1988 the Zimbabwean government
appointed a commission of enquiry to look into ways for expanding
tertiary level education. But there are very few qualified
teachers to work at the secondary school level. There are almost
50% unqualified primary school teachers. One solution suggested
is to expand part-time courses into a fully fledged distance
education programme, (Matshazi, Perraton and Guiton, 1986). The
main problem in expanding part-time provision at the UZ, is that
there is no research base which can be used to guide the
direction to be taken. It is not known how, for example, current
students are coping with distance education. Will it be viable to
increase part-time students? How many more students can be taken
on? In which courses without overloading the system? What are
students' chances for getting employment? What are the problems
faced by part-time students at the moment? What form of distance
education should be used? etc. It is felt that for the UZ to
expand into distance education without clear answers to at least
some of the above questions, may be too big a risk, thus the
necessity of this study.

Aims and objectives of the study:
The study attempts to reveal the current state of part-time
education at the UZ, and goes on to suggest a strategy for
the development of distance education . The current provision
was examined within a broader socio-historical framework, which

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has certain traits which are unique to Zimbabwe. In order to be in a position to suggest a future direction, it was necessary to:

- briefly re-appraise the history of Zimbabwe, with particular attention to developments in correspondence education;
- review as closely as possible all relevant literature.
- re-appraise and align relevant learning theories;
- examine trends in communications technology relevant to distance education;
- analyse several distance education models;
- conduct a questionnaire survey of part-time students at the UZ and a limited number of Open University (UK) students for comparative purposes.

Conclusions were drawn from the data and a proposal was then made for expanding distance education at the UZ with interesting implications for a national programme of distance education.

The significance of the study:

The study is significant in a number of critical areas and may have useful implications for:

- tertiary level distance education;
- learning in isolation theory;
- use of media in tertiary level distance education;
- educational technology and computer data analysis;
- systems design and training;
- problems faced by distance education students;
- critical thought

As an applied science, distance education technology cuts across all subjects, but emphasis was placed on communications technology. The most significant finding of this study was that there was a strong correlation between books and the media

students found most effective for their studies. Even though this is not a new finding, it has particular significance in developing countries.

One key area of significance concerns the cross-cultural impact of studying at a distance. The psychological and social problems encountered by students involved in distance education programmes are the same.The chief reason for dropout, for example, was given as issues concerning the learners' families. DE students all have, on average, about fourteen hours of study time a week, etc. Students differ mainly in materials available for study and their reasons for studying, if replicated elsewhere, may help to allay fears and exaggerated claims that students in developing countries need different treatment from those from developed countries. This may also open the way for the greater use of research available in developed countries without fear of those using learning materials from developed countries being accused of cultural imperialism.

Finally, this study has helped to highlight new ways of data analysis, treating people and the importance of planning and staff training. Effective communications are vital for the smooth running of any organisation, but in distance education it is absolutely crucial. For these reasons those concerned with education and the planning for distance education will hopefully find this study useful. The temptation to make this study entirely a third world scenario has been resisted. As such it is hoped that any distance educator may find it useful.

Literature review:

Perraton, (1982) remarks that in 1964 he could only find about half a dozen books and articles on distance education as opposed to several hundred in the eighties. There is now a lot of material on distance education. There were, for example, over two hundred submissions for the twelfth World Conference publication, in Vancouver, Canada in 1982. The 14th conference held in Oslo, Norway, in 1988, received more than three hundred papers. Some kind of vetting had to be used to select those papers which were to be included in the conference publication. Distance education is now a mature but still controversial discipline. Even though there is now a lot of literature on distance education, some of it is highly specialised and very difficult to obtain. The older literature, which was less specialised, on programmed learning and educational technology, is more readily obainable than the latest literature on distance education and open learning. As such, much of the literature for this study was found through personal contact, visits and interlibrary loans.

Here, we shall attempt to draw a very broad field from the literature, as the style used for this study means that there is very heavy literature review in each chapter. The following section will therefore focus on:

. literature search procedures;

. major areas of study within distance education;

. mass media theory

. changing views about people and education

Literature search

The literature search started at Stirling University Library. The author was struck by the very small number of books which were in the distance education section; there were barely half a dozen books on the subject. The author was alarmed and immediately made a visit to the Open University office in Edinburgh. A discussion with an interested senior counsellor led to several references which included a whole set of the Open University journal, "Teaching at a distance". Another visit was made to the Scottish Council of Educational Technology in Glasgow, where further references were collected, in fact several hundred.

Discussions with several people at Stirling University led to even more references. It was then discovered that distance education literature was scattered in many places within Stirling University Library; Education, Film and Media, Sociology, etc. The Education Index was a good source for 70s material, but had little in the way of current trends in distance education. A computer search on ERIC produced a printout with more than 100 references, unfortunately most of the references were out of date and concentrated mainly, on 60s and 70s descriptive studies, on radio and television experiments. The usual tactic of picking references from the back of books or articles proved valuable in screening the most important contributors to distance education research so far, and the key areas of distance education.

A visit to the United Nations University Information Centre based at the OUUK, exposed more than 8,000 sources. Further references were discovered through visits to the ZIFF at the

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FernUniversitat, in Hagen. Valuable advice and references were also found from the International Extension College (IEC) staff based at the University of London Institute of Education and the Commonwealth Secretariat. A lot of the material from the IEC and the Commonwealth Secretariat was found to be more practical and descriptive. At a later stage of the research, a very valuable source for Australian distance education materials was found. This broadened the base for arguments, particularly on mixed mode distance education. Communication with institutions all over the world brought in valuable information, annual reports, university prospectuses.

There are now no fewer than a dozen English language Journals on distance education. Most of the old educational technology and programmed learning journals have either ceased publication or changed their names, to "Open learning" or something more fashionable. A notable example is the OUUK "Teaching at a distance", which is now published by Longman and called, "Open Learning". New journals which have come in include the Australian International Journal of Distance Education. There are also several newsletters, which includes one produced by the Association of African Distance Education. A lot of material still appears in adult education and media in education journals. The above information is meant to highlight that the literature search net for distance education should be cast as wide as possible.

The distance education system: In chapter three, we shall examine the concept of distance education in much more detail, it may be

appropriate here to sketch out a few areas of importance. A distance education system must have an administrative system, student support system and a course development mechanism. Why should that be so? The answer may lie in the theory of distance education, which draws on other theories; a theory of how we view people and the mass media theories for example.

A theory of distance education: There have been various attempts to develop a theory of distance education. The most substantial efforts on the theory of distance education have been by Wedemeyer, (1981/83); Moore, (1973/77); Holmberg, (1982/84/85-/86/88 etc.) Baath, (1979/82/83) Peters, (1983); Keegan, (1982/86); Perraton, (1974/83/84/85/86 etc.) and many others.

They have all been unable to detach distance education from the general theories of education, Ausubel, (1968); Gagne, (1975); Skinner, (1968); Rogers, (1969) etc. (see chapter four). Baath, (1979) and Holmberg, (1982), have provided a comprehensive review of these learning theories in the light of distance education. The British Open University has contributed to the media element of distance education through the work of Bates, (1972/73/76/82/84/87 etc.), and many others at the Institute of Educational Technology.

Many terms have been used in an attempt to analyse distance education. In America, Wedemeyer popularised the term "independent study". Knowles, (1983) has coined the term "andragogy" with little impact, whilst Delling, (1983) developed "telemathics", also with minor impact. In many European

countries, DE is referred to as home study, while others have resisted change and still use "correspondence education". Some have moved on, particularly in Canada and are now talking about open learning.

What all the scholars agree upon is that there are three major elements in distance education:

. administration
. course materials
. student support

Peters'(1982) concept of distance education, as an industrialised form of education, has led to the view that distance education is a system. Some scholars (Lewis, 1971 a,b and c) have used the systems approach to explain course development. Holmberg, (1985) has developed a theory of guided didactic conversation based on the work in congitive psychology by David Ausubel, (1968). Moore's (1973) analysis of distance education is also standing the test of time.

Some scholars have concerned themselves with the practical aspects of distance education, Rumble, (1981/86/88) is mainly interested in the planning aspects. Northcott, (1984/86/87) and many of his colleagues in Australia, (e.g. Castro, 1985) focus on student support strategies, course development and the dual mode format of distance education . Siachiwena, (1980/83/85/88) and Ansere, (1982/87) highlight the problems of running a distance education unit in developing countries.

Canada has been another source of interesting distance and open learning scholarship, which has a practical base, through the

work of Daniel,(1982/88) James,(1987); Mugridge and Kaufman,
(1986); Calvert, (1988); the mobile college described by
Salter,(1982) etc. There is an emphasis on multi-media and 'high-
tech' strategies in Canada; thus the telephone based distance
University of Waterloo and the Open Learning Network of British
Columbia.

Higher education distance education systems: Kaye and Rumble,
(1982) and Perry, ( 1976/1984); Graff and Holmberg, (1988) offer
comprehensive reviews of the practice of higher education
distance education in various institutions, all over the world
including India, the West Indies and so on. Jevons et al
(1986/87) have contributed to our knowledge of distance education
in the SADCC region. Holmberg,(1985) has reviewed literature, and
divided it into useful categories, for easy reference. Even
information on efforts in China, (Hawkridge, 1987; Zhao,1988;
Zhou,1988) and Japan, (Yoshia Abe,1988) is adding to the rich
mine of distance education information.

What comes out of this preliminary survey, is that for distance
education to occur, the following components must be included as
summarised by Perraton, (1983):

.   learner and instructor must be apart;
.   there must be use of various media;
.   there must be provision of the possibility for occasional
    face-to-face contact;
.   there must be an organisation;
.   there must be systematic student support, feedback and
    evaluation.

These five points formed the main focus of our investigation and
the questionnaire survey, in the attempt to examine the problems
of part-time students at the UZ. Before we proceed to discuss

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the main methods of investigation used for the study, we shall briefly discuss some examples of mass media theory and those theories concerned with how we view people.

Mass media theory: Mass media theory is vital to an understanding of distance education because it helps us to know and understand the process by which we get across our messages to the potential consumers, who are not there with us. We may, through common sense or information provided by other sectors, (e.g. unemployment or redundancy statistics), know who these students are. In some cases we may need to use audience research methods to find out our potential clients. Mass media theory is a new and developing discipline and currently utilises theories from other subjects especially sociology, education and psychology. The main questions it raises are:
- who communicates to whom? (sources and receivers)
- why communicate? (functions and purposes)
- how does communication take place? (channels, codes, etc.)
- what about? ( content, objects of reference, types of information)
- what are the consequences of communication? (intended and unintended)

McQuail, (1987 p. 7)

It is vital, as McQuail points out, that there are many levels of communication and mass communication (society-wide) is just one of them. The other levels are:
     . institutional/organisational (political or business)
     . inter-group or association (local community)

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- intra-group (e.g. family)

- interpersonal (e.g. couple)

- intrapersonal ( e.g. processing information)

The difficulty any distance educator faces is that print is often addressed to the intrapersonal (internal cognitive) level while the distribution medium and strategy may be focussed on the society-wide level. This may be the case if the newspaper is used, for example. Television and radio are equally difficult to handle for individual learning purposes, as they target the mass level. Video and audio cassettes are increasingly being used in order to make audio visual media more personal. Some of these issues will be picked up again in chapter five and six below.

## Views about people and education:

There are many different views on how to democratise and increase access to higher education. We shall examine only three dominant schools of thought which were used in the UNESCO study, Spaulding and Kargoderian, (1981):

- conservative/ultraconservative;

- Liberal/Reformist;

- radical/ultra-radical

All these viewpoints define the terms 'democracy', 'equality' and 'access' into higher education differently. There is, however, a narrowing of the gaps between these viewpoints, particularly between the reformists and the radicals.

Each view has far reaching implications not only for who gets access, but for educational administrative strategies used and

fundamental assumptions on the learning and motivational processes. (Are people capable of learning on their own? for example)

Conservative/ultraconservative school of thought: An important feature of this perspective is the elitist stance embedded in its fundamental assumptions about people. This view assumes that God bestows aptitude on the individual and that intelligence is therefore innate and can be measured through, for example, psychometric tests.

The role of education is perceived as that of giving opportunity to the most able, after the initial stages of education. Examinations are used as filtering and screening devices at the end of high school. Access to higher education is a privilege of those with high academic ability as measured by attitude, and aptitude achievement tests. The most able enter elite occupations while those less able enter less attractive jobs. Equality is believed to be maintained through testing and competition.

The ultraconservative, or far right as it is sometimes called, goes further than this. It gives a genetic explanation to human ability. Extreme examples of this view are found in Biesheuvel,(1967) and Vernon, (1979). Murphree et al (1975) are unsympathetic to this view, and strongly criticised its use in Rhodesia, South Africa and many other countries. A majority of scholars deplore this view and support instead the liberal/reformist perspective.

Liberal/Reformist perspective: The liberal/ reformist perspective

takes the view that an individual has potential for learning, but that he or she is influenced by the socio-economic environment. They also believe in tests, but strongly feel that these tests should take into account environmental issues. Academic merit is acknowledged but mainly as an indicator of potential which it is believed can be improved by experience.

Equality of opportunity at the beginning of formal schooling is regarded as vital. After that, it is believed that everyone should be given a chance, by removing external barriers and curricular differentiation up to high school, which then serves as a filtering device. Testing, used as a filtering device, is supposed to free those who are able to move faster if they so wish and to give the less able a chance to try again. Perseverance is regarded as honourable and is rewarded. Opening higher education to more people is regarded as vital to the smooth development of society. There is emphasis on the structural reform of education, so that more people can get in. Often, failure in examinations is blamed on the curriculum and teaching methods rather than the individual. As such the door is left open for those who may decide to come in again, should their circumstances improve or a need for higher education arise.

Radical/ultra-radical: Radicalism is often viewed as a major departure from established societal norms. In the past, it was sometimes mistaken for Marxism/Leninism. As was mentioned earlier, this wide gap has now narrowed, and it is now recognised that radicals can lie on the extreme ends of both conservativism and liberalism.

When used from a socialist perspective, radicalism regards education as a fundamental right for everyone. It is believed that ability should not be a barrier to success, as intelligence is regarded as a natural phenomenon which is influenced by both public and private environments and can therefore not be measured, at least not by traditional psychometric approaches. Education is directed towards the needs of the individual as determined by society.

Secondary school is not regarded as a filtering device and special help is given to disadvantaged groups. The criteria for assessing equality, is the degree to which the education system provides for the needs of all. There is emphasis on exposing the individual to relevant social chances. This means that the individual must be prepared to utilise opportunities should society so desire. Society is regarded as the centre of life and the individual is seen as just a small part of it (all perspectives now recognise this point). The radical perspective shifts the burden for any blame in underachieving by individuals to the education system and society at large.

We said at the beginning that there is a narrowing of the gap between these perspectives as new facts about people and how they learn are discovered. The suspicion with which distance education was first viewed may show that we regard learning as a social activity. Now that the media play such an important role and as such some learning can take place in isolation provided certain vital enablers are taken into account ( see chapter four for a full discussion.)

This theoretical framework served as an important springboard to this study and the strategies adopted. Distance education emphasises the value of the individual as a learner.

## Methods of investigation:

The nature of distance education has forced the adoption of multiple strategies. The now trite 'evaluation as illumination' method developed by Parlett and Hamilton, (1972). In addition to their predominantly evaluative stance, the author adopted aa holistic approach: literature; media, television and radio; contact visits; recorded and unrecorded interviews; observation, participation through relevant group discussions, conferences and a questionnaire survey were used.

The literature survey provided the springboard for most of the work under taken; but as was mentioned above, most of the highly specialised and latest literature was difficult to find. Eight distance education institutions were visited during the study; these included the OU (UK), IEC and ZIFF at the FernUniversitat. Many more institutions within Scotland were visited. Four recorded interviews were conducted: three were audio recordings, which included one with the Assistant Director of Scottish Council of Educational Technology, Nigel Paine; and one was a video recording with a former OU student.

Because Stirling University is a centre for the OU summer schools, a lot of observation took place over four summer sessions, (1986-89). These observations were casual and only sought to raise questionnaire material for use for the pilot

study and with UZ students. They however proved very useful in gaining detailed knowledge of the problems faced by the students. Both television and radio were used extensively during the study. Television was used to monitor OU TV programmes, Open College courses, from September, 1987 to June, 1989. Many other relevant programmes were diligently followed on TV. The radio was useful for general topical issues and for the OU student Open Forum programme on every first Monday of each month . Again this is a very wide and different field which could warrant a study in its own right, in this case, it was used just to gain further insight into the courses.

The questionnaire survey provided the focus of attention for the study, full details are in chapter nine. The systems approach proved to be a very useful strategy to adopt for the organisation of the study (see Naughton, (1984) and Checkland, (1981).

Organisation of the study:

It is easy for a study of distance education to become difficult to manage. Chapter two attempts to avert this danger by locating the research issue in a Zimbabwean socio-economic and historical context. It combines the issues of racism and land apportionment with educational provision in the colonial era. The mix provides interesting insights into the historical significance of deprivation, physical separation and isolation and the role of correspondence education in Zimbabwe. This may be a fertile climate for current efforts in distance education in Zimbabwe.

Distance education is now a pervasive issue in educational

provision, but often people merely pay lip-service to it. Many people are still confused as to what it really is. Distance education is now a sophisticated concept, and we had to spend some time discussing what it was. Part I: chapter three addresses the issue of the concept of current distance education, definitions and related concepts.

What are the suitable conditions for people learning in isolation? The whole idea of distance education is an attempt to facilitate learning and change attitudes. Chapter four re-appraises the learning process and motivation in social isolation.

Part II, chapters five and six focus on media and communications technology. The role of older media is appraised in chapter five, while newer technologies, like computers and satellites are discussed in chapter six.

There is tremendous potential for the use of the telephone, even satellites, in Zimbabwe and in the rest of the SADCC region. A little more information on these technologies is included. Some description of satellite technology is included, in order to dispel certain myths which have developed. Contrary to popular belief, satellites have a limited lifespan, so when decisions are made to use them, this must be kept in mind. Other technologies may appear expensive, but may save a lot of time, money and effort if used for staff training and course development. These are the most expensive aspects of distance education.

Various distance education models are examined in Part III in

chapter seven. Emphasis, is placed on models used in developing countries. This leads naturally to a re-examination of the distance education infrastructure and the current provision in Zimbabwe, in chapter eight.

An analysis of the questionnaire results returned by OU and UZ students show that students in developing countries and in some developed countries share, in the main, the same problems. Books are regarded as the critical factor in distance education. Chapter nine discusses in great detail these and other interesting findings.

In a study such as this, which focuses on a very small aspect of distance education, it is hazardous to suggest any proposed model for the University of Zimbabwe, let alone the country as a whole. But with the confidence gained from the literature and questionnaire results, tentative proposals are made in chapter ten.

Conclusions are drawn in chapter eleven. They reflect on the perceived impact of this study to university level distance education, learning and motivation in social isolation and the role of media and educational technology.

We shall proceed now, by considering first the historical context of Zimbabwe.

CHAPTER 2


A ZIMBABWEAN CONTEXT FOR DISTANCE EDUCATION AND DEVELOPMENT.


"If people genuinely prefer hope to present
realities they are entitled to do so".

Pearce Commission (1972)


Introduction.

Since Zimbabwe has publicly declared itself as a Marxist Leninist Socialist State, (at the ruling political party level) it may be relevant to adopt the radical/ultraradical perspective (Spaulding and Kargoerian, 1981) in examining whether its higher education objectives are being met and the role which can be played by distance education. The radical approach to education as we have seen, seeks to allow the individual to achieve as much as his abilities make possible. As shown in the previous chapter, there is emphasis on relevance of education to societal needs and productivity. Learning is perceived as a life long process, as such, the door is left open so that the individual can move in and out of the education system whenever it is necessary. Examinations are not used as screening devices, but they are used as quality control instruments for both individual effort and the education system as a whole.

Education is a product of socio-economic and political factors; but Zimbabwe has a history which is not congruent with ideas

which currently hold sway. As such, the key historical determinants will be briefly examined in the following pages. Past and current efforts to increase access to education in general will also be discussed, but experience in distance education in Zimbabwe, particularly in higher education, will be left to a later section.

## Brief Historical Overview.

It is almost a century ago that the first white settlers occupied Zimbabwe. The British South Africa Company was granted the Royal Charter to expand its mining activities from South Africa to north of the Limpopo in 1889. A sad chain of events, from an African point of view, which are well documented elsewhere then followed, (Windrich 1975, Good 1973 etc.).

As Cecil Rhodes had explicit colonial ambitions, he seized this opportunity to establish company rule in the country which lasted for more than thirty years. During this period, the country was virtually run as a huge private estate from Cape Town. Many of Rhodes' volunteer forces were paid in kind for their services; they were promised large pieces of land as well as mineral prospecting rights for their part in quelling subsequent rebellions by the indigenous people who were crushed. Thereafter, segregation of races was established. The company was eventually bought out of administrative power in 1923, by the British government for the sum of £3,750,000, Windrich (1975 p.16), but it kept mineral rights.

Southern Rhodesia was granted "self governing colony status" from

1923. Under Godfrey Huggins' leadership, as prime minister, (which was a long period 1923 - 1953) a number of official legislative Acts were passed which were to prove segregatory in the end. The main developmental steps can be traced as follows: British South Africa Company rule,(1890-1923); The "Establishment" (1923 -1953) [1]; The Federation of Rhodesia and Nyasaland, (1953 -1963); Unilateral Declaration of Independence, (U.D.I.) (1965 -1979) and Majority Rule and Independence, 1980. The major developments which can be traced as a single thread from Company rule to U.D.I. were the gradual move towards racism and segregation. The first of these moves came under the guise of providing for blacks and their rights to certain portions of land: the Land Apportionment Act of 1931, which followed the Morris Carter Commission on land allocation of 1925.

After U.D.I. the Land Apportionment Act was strengthened by further acts: the "Land Tenure Act" which effectively divided the country into black and white areas. The "Maize Control Act" and the "Land Husbandry Act" which sought to control the African economically by offering lower prices for their farm produce. The Land Husbandry Act restricted the African to farming the same

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[1] Godfrey Huggins' party the "United Federal Party" was known as the "Establishment" because of its association with early settlers. It was in power for almost fourty years under different names. It was regarded by many whites as a symbol of stability and continuity. It lost power to the Dominion Party which was more right wing in 1962. The Dominion Party later became the Rhodesia Front which was an effective dictatorship for almost fifteen years.

piece of land and limited the number of stock which could be held in each plot of land. This law had a tremendous impact on the voting ability of many blacks during colonial rule, as only those who had a certain level of secondary education and a specified level of economic power could vote on the "A" roll which was generally reserved for whites. A series of other Acts followed, to ensure that the system of segregation was foolproof. It may be useful to look at some of these laws in more detail as they directly served to control the number of blacks who were able to gain access to higher education.

## The Land Apportionment Act (1931).

The Land Apportionment Act was the corner-stone of colonial rule in Southern Rhodesia. This act removed the rights of blacks to own land in towns and any other areas designated for whites, Windrich (1975 p.39). In her discussion of educational problems in Rhodesia, Dorsey (1975 p.28), details the land grading system used. The result was that the country was divided into four regions: Region I was the best land with plenty of water, and has fertile and suitable for farming; Region II was fairly good land; Region III was land suitable mainly for animal grazing and was designated as national land, mainly reserved for National Parks. Region IV was the worst land, which was poor, sandy forest land and unsuitable for farming and was further away from roads and railways. Only about 25% of land in grade I and II was left with the Africans. Region III was National parks land. Predictably, most blacks were settled in poor land in region IV. This same act made it possible for Africans to be evicted from rich land to

make way for white farmers. Thousands of blacks were evicted and this caused great bitterness. Many of these people, for example in Matabeleland, were settled in forest lands of Tjolotjo, Lupane and Nkai.[2] The Land Apportionment Act effectively restricted Africans from living close to whites even in towns and encouraged separate education and development. Pass and vagrancy laws were enforced in order to restrict the movement of blacks into towns as was the case in South Africa. As a certain number of blacks were required to live in towns in order to provide the necessary labour, a number of Acts were also enacted in order to control the numbers gaining employment. The "Man and Servant Act" which had been in operation since the 1920s was amended in 1959. The "Industrial Conciliation Act" was the result.

## Industrial Conciliation Act (1959)

This was one other piece of legislation which was to have disastrous effects. This act excluded non-whites from most grades of employment which were not manual labour. Employment of migrants at all levels of the economy was encouraged in order to destroy psychologically indigenous blacks, who were not trusted. Manual labourers were cheaply brought in from Malawi, Zambia and Mozambique. (Clarke 1974 p.113). These different

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[2] These districts formed the hard core of guerrilla and political activity in Matabeleland during U.D.I. Ironically they bore the brunt of dissident activity after independence and a lot of lives and property were lost again.

conditions of employment and underemployment of local Africans nurtured segregatory practices. Blacks were not allowed to join apprenticeships and their trade unions were stringently controlled.

Frustration with the political system led to the first whispers of dissent amongst black workers by 1960. These whispers had turned into a crescendo of dissatisfaction in the form of strikes and public disorder. The "winds of change" swept away established tradition in favour of the new black aspirations for independence. Indeed, many Southern African countries gained their independence at this time, by contrast, Rhodesia ushered in its most reactionary government.

It was noted earlier that the Rhodesia Front strengthened the Land apportionment act by introducing the Land Tenure act in 1969. Its purpose was to share the country equally between blacks and whites in terms of acres, regardless of the quality of land held and the fact that the European population was less than 10% of the whole population. Furthermore, the act was to put a stop to what was perceived as encroachment on white land by blacks. Many other minor but irritating acts were passed, for example the "Maize Control act", which ensured that African farm produce was marketed at a lower price than that of white farmers. The explanation for this bizarre act was that:

> The Maize Control Act as it affects the African is an attempt to deal with an internal marketing problem, ... to deal with competition from goods produced by people whose wage-earners were content with a lower standard of living.
> Windrich (1975 p. 116)

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It is of course obvious that Africans were far from content as evidenced by the political parties which were formed in succession to voice African opinion but were promptly banned each time. (see Windrich 1975 pp. 278 - 284). With all democratic opposition banned, the Africans had no alternative but to turn to armed struggle. A number of peaceful attempts to solve the civil war failed because of lack of trust between the blacks and whites. The best known of these peaceful attempts was the work of the Pearce Commission, which revealed for the first time the true extent of African opinion regarding their future. Good, (1973 p.318-327)

The Land Apportionment Act with its ancillary legislations, the Land Husbandry act, (which ensured desctocking in African areas), the Land Tenure Act, Pass Laws, the Industrial Conciliation Act and the "African Education Act" together effectively separated the two races. The effect of this series of Acts on education and employment and the advancement of blacks was devastating. The political and economic structure had no place for indigenous Africans. The economic sanctions applied by Britain and the international community after U.D.I. were not very effective because many countries did not co-operate. The willingness by South Africa to act as business broker for Rhodesia at this time further complicated the issue. Demands for employment by blacks received the reply " talk to the British government to remove sanctions". This trick worked to split African opinion as some blacks believed that it was genuine; thus the futile internal settlement between Smith and Muzorewa in 1978

which was destined to fail. Atkinson (1972), Murphree et al (1975) and Zvobgo (1986) have all shown how African education was set back by these segregatory laws before and after U.D.I. These laws had to wait until independence when they were either repealed or amended.

Colonial Education Policy:

Even though Colonial education policy was greatly influenced by international trends especially after the first and the second world wars, a lot of what happened was contrary to international trends. Ashby, (1964) discuses how global concern about African education led to the Phelps-Stokes Commission. In Zimbabwe there were to be many such commissions, some internal like the Judges report of 1962 ( see Windrich, 1975 p.171-4) and others externally sanctioned, like the Asquith Commission just before the second World War. (Ashby 1964 p.19) . In fact, lip service to the education of Africans was paid in order to elude international pressure, as very little was done until very late.

The development of African education from 1900-1979, can thus be viewed against a background of "racism, social and political conflict, economic deprivation and war", according to a Zimbabwe Government Paper (1982 p.2). This Paper goes on to outline six factors which characterised African education during this period:

- A growing and insatiable demand for education by the masses.

- Severe limitations being placed on the development of African education by succeeding minority Governments.

- Church/State conflict over education.

- Africans taking more responsibility for their own

education. [despite limited resources]

. Professional development of African teachers.

. The growth of nationalism and of the liberation movement which began a revolution in Zimbabwean education.

Zimbabwe Government Conference paper,(1982 p.2)

We shall briefly examine the six assumptions in the context of this debate in turn.

Insatiable demand for education:

From the beginning of colonial rule, Rhodes decided that there were going to be two separate systems of education, ( Zvobgo 1986 p.16). For the European, there was to be an elitist type of education which was open to every European child and compulsory up to 16 years of age. European education was a government responsibility right from the beginning. On the other hand, African education was left entirely to the efforts of the missionaries. Before 1901, Company rule did not show any interest in African education. The government's first contribution to African education was a grant of £ 133.00, to be shared by Mission schools in 1901. There were very few primary schools as enrolment was only 265 pupils. Even this small number of students alarmed many settlers. One complained in the Herald:

> I do not consider it right that we should educate the native in a way that will unfit him for service. He is and always will be a hewer of wood and a drawer of water for his masters. (Quoted in Dorsey, 1975 p. 41)

Despite adverse publicity, missionaries from a variety of churches continued to improve the education of Africans. Combined primary school and secondary education expanded from 265 in 1901

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to about 43,094 after the first world war in 1920. This more than doubled after the second world war to 238,040 in 1950. By 1970, the figure had more than doubled again to around 703,729. Government expenditure on African education rose from £9,467 in 1920 to £527,088 in 1950 and Z$ 17,379, 000 (£8,689,500) in 1970. Public expenditure on African education rose from 0,02% in 1901 to 9.30% in 1965. Expenditure on African education started to fall after U.D.I., for example in 1970, it was about 8.60% of the national budget. (see Dorsey 1975 p. 43, and Zvobgo 1986 p.25).

A large number of both primary and secondary schools remained open despite the civil war. But the numbers had either stagnated or declined as more and more young blacks fled to join the liberation struggle. For example, in 1978 primary and secondary school enrolment stood at 829,039 and 73,026 respectively. In 1979, with the added confusion of the internal Smith / Muzorewa settlement, primary enrolment had declined to 819,128 and secondary numbers just stabilised at 73,540. Of this number, only 3,016 students were in their fifth and sixth year. (see Zimbabwe Quarterly Digest of Statistics, 1986 p.5)

Limitations on African education.

The discussion above showed clearly the complex web of legislation used to limit African access to education except primary education, which was regarded necessary for the blacks to work for the European. The Native Education Act of 1959 which on one hand attempted to improve the quality of teachers also reduced its effectivenes by introducing heavy loads on staff and double sessions instead of training more teachers; on the

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contrary, the primary school teacher establishment was frozen.

Even though the broad objectives of the 1966 and 1967 education plans (Dorsey 1975) were honourable as they sought to increase primary enrolment, progress to academic (F1) secondary school was limited by examinations to 12.5% of all those who completed primary school. New Junior secondary schools (F2) which emphasised vocational subjects could take 37.5% ; the remainder of the children, 50% "could continue their further education, if they so desired, through Commercial correspondence colleges at their own expense". Zimbabwe Government (1982 p.4)

The above plan did not succeed and ten years later only 19.5% of primary school leavers entered some form of secondary school. Plans were only modified to create new secondary schools, when full primary education had been achieved. It should be noted that white children were in the meantime able to learn for as long as they wanted; African parents were annoyed and lost faith in the good intentions of the new education plans.

Professional development of teachers.

The quality of education gradually improved. The length of the time children spent in primary school was increased, and slightly more found their way to secondary schools.

Secondary school teachers received what was termed a standard qualification, T1. The Gwelo Teachers' college started training secondary school teachers in 1963. From 1970, with the introduction of vocational secondary schools, two further

secondary school teaching qualifications were introduced; the T2A and T2B to cope with increasing numbers of vocational students. Both these qualifications required "O" levels but the training was only for two years. T2A catered for teaching academic subjects in these vocational secondary schools and T2B was vocationally biased.

The Native Education Act of 1959 introduced uniform salary scales for African teachers, a pension and a common disciplinary code. These moves improved the status of the teaching profession. All African teachers came under the Unified African Teaching Service( U.A.T.S).

An important proviso was that teachers with standard qualifications became entitled to the same salary as white teachers. Many teachers thus were motivated to study by correspondence if they wanted to improve their earning power. Hundreds of those teachers who had a matriculation certificate registered with the University of South Africa (UNISA).

Economies of scale were introduced into teacher training and many church run teacher training colleges were closed in favour of a large co-operative college, the United College of Education which opened in 1970. The Lewis Taylor Report of 1974 (see Zimbabwe Government Paper 1982 p.8) gave a new impetus to child-centred education and the adoption of new curricula. Many other academic issues were included in the report: discovery and active learning was encouraged. All children, not just the academically gifted were to be encouraged to benefit from primary school education.

Relevant practical courses like gardening, handwork and so on were to be emphasised, (see Partridge, 1972). But the fundamental differences between black and white education remained.

## Conflict with the Church.

Different denominations had built school networks, first on their own and then with state help. The few government schools were only in towns. The church had provided Africans with education partly by way of protest against what they saw as apartheid. After U.D.I., the Rhodesia Front government limited all expansion of Mission schools intended for Africans. The church put up a fierce battle to keep control of schools but they eventually lost out as the government was clearly determined to control African education in order to limit those who could vote. (Windrich 1975 p. 187). From January 1, 1970, responsibility for education was to be shifted from churches to local councils which had very little administrative experience. Churches could retain their schools at their own expense, but many gave up the struggle.

## Community Boards and growing Nationalism:

Development of new schools was restricted after U.D.I. and by 1967, new schools in underdeveloped areas could only be built by Community Boards. By 1970, a substantial amount of primary school finance was raised by the communities themselves through various schemes which included labour and the introduction of registration fees.

In order to force more contributions from local communities, government contribution to teachers' salaries in community

schools, was cut by 5%. This led to a lot of financial hardship for many teachers whose communities could not raise the extra money required to pay the teachers their stipulated salaries. As a result, many teachers moved into towns and government schools, leaving many rural schools with huge shortages of manpower. Many local councils found it difficult to operate during the liberation struggle and more than three quarters of rural schools closed or were destroyed.

Schools and local councils were prime targets for guerrillas because they had the support of the government and African chiefs. They were perceived as symbols of domination by an illegal regime. As the war escalated, the schools became a recruiting ground for both the guerrillas and the Smith forces. Many teachers found it difficult to operate under the system, many joined the liberation struggle where they continued to teach in refugee camps in Zambia and Mozambique. Many returned before independence or soon afterwards.

The impact of colonial policy on African higher education.
It is clear from the foregoing that Colonial education policy discriminated against the blacks. Whereas white children enjoyed one of the highest education standards in the world, African children, as we have seen, received the education which made them functionally operative in the service of a white economy. The only post secondary education encouraged was that geared to producing African teachers and nursing personnel. There was virtually nothing else an African with a degree, for example, could do in the way of employment.

Dorsey 1975, charges that this elitist educational policy was dysfunctional for the African because those few who survived the examinations eventually found themselves without employment. Sometimes the situation was desperate as one "O" level graduate observed:

> ...since I left school I am staying with my parents. I am helping them in harvesting the fields ... My happiest day was when I received my results and I saw I had obtained a second division pass. I thought that education would change my life, but it is useless... Dorsey (1975 p. 164) .

In response to a questionnaire enquiring about his job prospects in 1971, one school leaver with a first class "O" level pass observed:

> The feeling of neglect covers my mind everyday and sometimes I can't help feeling that the colour of my skin is an awful sin. I say this because any suitable jobs advertised in the Newspaper are for Europeans only. There are also many European employment services which are not interested in Africans. Murphree (1975 p. 165).

Briefly, higher education in colonial Zimbabwe was a source of profound frustration for many blacks. Their plight forced them to support the liberation struggle in search of a chance to get an education that would help them to get a job in the future. Harris (1974 p.22) points out that there were very limited opportunities for training blacks in Rhodesia. Those who were lucky to receive any form of training found that instruction "was frequently unstructured, unprogrammed, unsupervised and the training period fairly limited". Harris goes on to describe the frustration of "O" level graduates and their families:

> He (the father) would have made strenuous efforts to educate his children, because employment was becoming increasingly difficult to obtain and education somehow seemed to hold the

key to material liberation. (School leaver) ...having completed GCE at "O" level, would then have discovered that his education was not as useful as he and his parents had once assumed. He might have worked as an office cleaner or security guard if he had been fortunate enough to be picked from the crowds that surround every office... After a few years of frustrating and fruitless search (for something better) interspersed with work of a laborious, low paying and non-continuous kind, he would seek help in financing driving lessons or some correspondence course that held promise of his becoming a mechanic, bookkeeper or typist. Invariably, after further straining the family purse, he would re-enter the job market with only slightly improved chances of success. Harris (1974 p.31)


## Educational expectations.

Many parents and young people had been persuaded to believe that, after independence, they would be able to get as much education as they required free of charge. That undertaking had been specifically undertaken in both the ZANU PF and ZAPU election manifestoes. Item "L" of the ZANU PF election manifesto for example, was clear on education:

> The state would under a ZANU government, maintain a uniform educational system and abolish the distinction between African education and European education. It will be government's major concern to maintain an educational system of high quality in respect of both its organisation and content. Zvobgo (1986 p.30)

Zvobgo goes on to list what he regards as the cardinal principles in the manifesto; one of the key elements being: " the basic right of every adult who had no or little educational opportunity to literacy and adult education".

With those objectives in mind, at independence in 1980, the government opened the "educational flood gates". Literally, any one who was "young" enough ( some 18 year olds could still be found in some primary schools) could register at any school. For

the first time in Zimbabwean history, there was one education system; but for the Group "A" (former white schools) and "B" (former black schools) [3]

Enrolments increased almost overnight; primary school enrolment leaped from 1,635,994 in 1980 to 2,260,367 in 1986. It is projected that it will be about 2,500,000 by 1990. Secondary school enrolments rose from 74,966 in 1980 to 545,841 in 1986. These figures should be viewed against a background total population of only about 8 million people. About half the population of Zimbabwe is of school going age leaving only a small proportion to sustain the country economically.

Technical education.

Kegwin (Zvobgo 1986 p.113) introduced some form of technical education for Africans in the early twenties. Two industrial institutions were established, first at Domboshawa in 1921 and at Tjolotjo in 1922. The actual curriculum followed at these industrial colleges was not any different from what many Mission schools were offering; which was basically carpentry, building and agriculture. The first real advancement in technical education was the experiment at Luveve Technical college between 1961 and 1964. Africans had received very little if any technical education at all. The Luveve initiative was a federal gesture

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[3] Critics of the Group A and B division of schools, feel that it is a perpetuation of the old racist principles.

which sought to:

- demonstrate the capacity of Africans for training in modern technical occupations.

- provide possible staff for the trade schools which were envisaged to train staff rapidly.

- train apprentices on the basis of two years of full-time initial training.

Harris (1974 p. 50)

The experiment proved to be such a success, because out of the first 26 students, 20 obtained first class passes for the City and Guilds of London Institute. This achievement annoyed white trade unions whose members were sitting the same examinations. They put pressure on the government to stop the programme. With the break up of the Federation in 1963, the Rhodesia Front scrapped the project, Luveve Technical College in Bulawayo was turned into a secondary school.

The technical needs of white students were adequately catered for by the Salisbury Polytechnic which was opened in 1927 and the Bulawayo technical college which officially opened on the 16th of July, 1951. Since skilled jobs were reserved for whites, there was no need for technical colleges for blacks. At independence, blacks were enrolled in all colleges as will be seen in the table below.

There was similarly a marked increase to colleges and the University of Zimbabwe after independence as the following table will show:

Table 2.1 Tertiary level enrolment in Zimbabwe 1980 - 1986.

|                  | 1980  | 1984   | 1986   |
| ---------------- | ----- | ------ | ------ |
| Agr. Colleges    | 173   | 610    | 888    |
| Trs. Colleges    | 2,824 | 7,365  | 9,504  |
| Tech. Colleges   | 3,469 | 10,373 | 18,213 |
| Univer. of Zim.  | 1,873 | 4,130  | 4,742  |

(Source: Quarterly Digest of statistics 1986 p.5)

A glance at the figures above reveal the gap between the combined school leaver population and the total number of places available in colleges and the University.

University Education: The University of Zimbabwe.

From the African point of view, there was very little need for a university in early colonial days for various reasons. The most important of which was that there were very few people with secondary education . Secondly, African graduates could only be employed in areas directly serving Africans. There were very few vacancies outside teaching. Even in teaching, there were limited secondary schools serving blacks.

The Asquith Commission coupled with internal pressure for a University, led to the establishment of the University of Rhodesia and Nyasaland in 1955, (Ashby, 1964). Preparations for a university were recognised as early as 1945, and a part-time Accountancy course was started in 1952. The University was

granted its Royal Charter in 1955 and the first classes began in 1957. Even though the University was multiracial, statistics show a disproportionate emphasis on enrolling white students to courses. In some Faculties, scholarships were not available for blacks. Zvobgo reflecting on this issue,observes :

> As is evident from the figures, the highest enrolment was in the Faculties of Arts, Commerce and social studies. for many years, these faculties were dominated by blacks as entry into the Science, Engineering and Medical Faculties was restricted. Zvobgo (1986 p. 129)

African students at the University of Zimbabwe remained fewer than whites right up to independence. For example, in 1960, African enrolment was 23.5% of 208. In 1969 this had gone up slightly to 35.8% of 846 students, Wakatama (1983 p.39).

After independence, the situation was reversed as 1987 figures will show:

| Blacks | Whites | Coloured/Asians | Total |
|--------|--------|------------------|-------|
| 6,397 (93.1%) | 317 (4.6%) | 159 (2.3) | 6,873 |

Source: UZ Information Office.

Because the decision to exclude blacks had been political, it was possible for the present government to redress the position politically. Indeed there is plenty of evidence right across the educational spectrum that the education system has been opened up to the majority. In 1988, for example, 2,350 first year students were admitted in all faculties out of 4,700 qualified applicants with "A" level passes.

But as we are all too aware, the question of access is much more

that just numbers. Crucial economic issues such as who pays for the education and how much of the national budget should be spent on it, are vital determinants. There are also important questions to be asked about the relevance of the curriculum to broader economic and socio-political objectives.

The UZ appears to have been addressing itself to some of these issues, particularly the question of relevance. In his first five year report, the first black Vice-Chancellor highlights that objective:

> From the outset it was obvious that, for the University to play its rightful role in society, certain steps had to be taken in a number of directions. Firstly, there was the need to underline the centrality of the university's role in development. I regard the University of Zimbabwe as first and foremost a developmental university which is singularly animated and concerned rhetorically and practically, with the search for solutions to the concrete problems of national development. Kamba (1985 p.2).

Many positive steps have been taken by the university to meet its stated objectives. For example, many new courses which are relevant to Zimbabwe's development have been added. Two new faculties have been formed since independence. Six Departments have been added to the University, which include Nursing Science and Mining Engineering. More than eighteen new Academic Programmes have been developed during the same period. The curriculum is also constantly being reviewed. (University of Zimbabwe, 1985 p.6). Technology biased B.Ed programmes have been recent additions. The University has also taken over responsibility for the Technical colleges' based Bachelor of Technology degree launched in 1985. Plans for an M.A. degree in Media studies and an M.Ed in Educational Technology are well

In order to carry out some of its more ambitious programmes, the University realises that it needs its own local staff. To this end, structural reform in departmental administration has been implemented for example, no longer are professors de facto heads of departments for life because the position of Head of Department is now separated from a professorship. Further along the line of self sufficiency, black members of staff increased from only 59 in 1979 to 141 (23.4%) in 1985. In 1983, the University of Zimbabwe initiated its own manpower development plan. To date about 58 members of staff have been trained and are now back at the university. (UZ Newsletter, December 1987 p.6) In addition, generous research awards are made available to any member of staff which include contact visits. This is in line with Gaston's (1974) call for "the University to be and must remain the place where exercise of reason can be pursued unhindered".

The evolution of the University was further strengthened by the enactment of the new University of Zimbabwe Act in 1982, which broadened the sphere of influence for the university and charged the University of Zimbabwe to:

  " Provide correspondence courses and extra-mural courses for
    young persons and adults". Zimbabwe Act no.27. (1982 p.196)

The University will not be alone in this direction, as correspondence and distance education are now formalised under the new Education Act no.5 of 1987, (pp. 32-47).
Indeed, it is now possible to find research in distance education particularly concerned with Teacher Education which will be

discussed in a later chapter. There are hints of support on the distance education initiative from the new Chancellor of the University of Zimbabwe, Robert Mugabe; on the occasion of his installation as chancellor he pointed out:

> Comrade Vice-Chancellor, thousands of Zimbabweans daily raise the question of university distance education. There are people already in full employment who want to earn degree qualifications through distance education while they continue with their jobs. Mugabe (1988 p.4)

As the University is part of a national developmental plan, it is vital to look at its wider system, particularly if innovation is envisaged as is the case above. Gaston, (1974 p.2) again puts it succintly when he says:

> When thinking about university distance education, one inevitably looks at the past and the present in order to predict the future, but we can never be certain [because] ...the scenarios are very heterogeneous and can give rise to an infinite number of variations according to changes in the value systems of individuals of the groups and of society.

We shall attempt to examine the University of Zimbabwe further through its wider system, by looking at the impact of the Transitional Educational Development Plan of 1982-85 and compare it to the current National Development Plan, 1986-1990. Particular attention will be paid to seeing if developments match the socialist ideals the government has set itself.

A synthesis of potential:

Kamba was not alone in underlining the need for relevance because Mutumbuka (1986 p. 8) shares the view that:

> Quantitative expansion in education cannot lead to a revolution in education.

Zimbabwean public opinion is agreed that change is required, whether this is possible or not is yet to be seen.

But government policy on the matter cannot be more clearly stated if pronouncements about education in the Transitional Development Plan (1982-1985) are to be believed. The stated objectives are:

. to ensure equality of opportunity.

. to ensure quantitative improvement through a significant expansion of educational facilities.

. to introduce significant qualitative changes with particular attention to:

- the relevance of education to national needs...
- greater emphasis in teaching science and technology..
- the building of an adequate and rational capacity for research and management.
- improvement of efficiency in the provision of higher educational services.

. to ensure that investment in education and training and the financing thereof is rationally planned and is fully integrated with the investment in other activities in the public and private sectors.

                                        Mutumbuka, (1986 p. 2)

Any observer will of course immediately recognise the above objectives are common to the Socialist or the Liberal/ Radical approach discussed earlier. We shall turn our attention to an examination of how successful Zimbabwe has been in achieving these goals.

Equality of opportunity.

With the removal of racism, any child could go to any school

nearest to his/her home. Education is a fundamental right of any child in Zimbabwe, and as such it is now compulsory. Items 4-8 of the Zimbabwe Education Act 1987 (pp.207-208) emphasise that:

> ...every child in Zimbabwe shall have the right to school education. No child in Zimbabwe shall be refused admission to any school on the grounds of race, tribe, colour, religion, creed, place of origin, political opinion or the social status of his parents.... education for every child of school-going age shall be compulsory....[and] tuition for primary education shall be free...

Broadly speaking, the first and second objectives have been a resounding success, even though there have been pockets of resistance from certain private schools. Some of these schools still give preference to members of their church, tribe or race, the screening devices are overtly being either economic or elitist examinations. Some of these schools are so expensive that they are out of the reach of many parents. Schools like that are however an insignificant minority.

The relaxation of school registration regulations, has encouraged many rural local communities to build their own schools. As the government supplies the teachers and other school materials, rural parents who otherwise could not send their children to school find it easy to do so. Communities around the Zambezi Valley, for example, who found it impossible to send children to school under previous regimes because of poverty, now they enthusiastically send their children to school.

The only snag is that there are not enough resources. Sometimes many children share a few textbooks or have to wait a very long time before educational materials arrive, due to bureaucratic

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inefficiency. Some critics believe that rather than the government attempting to provide school materials for every school, school books should be purchased for needy communities only in order to lessen the burden for the government.

There have also been quantitative achievements and enrolment figures given above will clearly show this. Since education is now compulsory at least at primary school, it was inevitable that enrolments would swell. Those concerned with education are all well aware that the real battle of efficiency and relevance still has to be fought. Mutumbuka (1986 p.4) acknowledges this battle ahead saying that "the education system is still basically British'. Mugabe 1986 (p.i) in a foreword to the first National Development Plan, may be justified in calling the period 1986 - 1990, a time for the "war of economic liberation'. But, economic development is heavily dependent on science and technology. It is to this that we must now turn.

Science and technical education:
The centrality of science and technology to the development of Zimbabwe is accepted and paid lip-service by many people. It was given prominence in the Transitional Development Plan, it still has a central place in the current N.D.P.

Achievements during the Transitional Plan included the expansion of technical colleges from just two in 1980 to more than five. A new technical college based Bachelor of Technology degree was initiated in 1985. At secondary school level, the Zimbabwe Science Programme (Zimsci) was launched in 1981 in order to help

rural schools teach science. On the practical level, a number of technological projects have been completed, for example the electrification of the Gweru Harare railway line and the Hwange Power station which is intended to extend electricity to rural areas. The Mazoe Earth Satellite was commissioned in 1984, facilitating quicker and more efficient telecommunication. There are however still many limitations which need to be overcome, particularly in manpower training and development.


Developmental Tasks.

Advancement in education is not only constrained by the availability of finance and manpower, but by the communications infrastructure and more importantly, by peoples' attitudes or consciousness as Cheater, (1988) calls it. Cheater, has discussed the contradictions and cognitive dissonance in Zimbabwean society today, particularly among workers. One of the key issues of her discussion, is the way:

> Recently promoted black supervisors, .. were caught after Independence in an intercalary conflict between their specific work units and the factory as a whole. Onto this conflict was superimposed, in the consciousness of all concerned, part of the Zimbabwean ideological model, in which colonially-generated racial conflict is alleged to mystify class conflict... Cheater (1988 p. 295)

A lack of motivation and a clear ideological base has undermined development in many sectors. The Zimbabwean press is full of cases of corruption and people in positions of power sabotaging projects. In education for example, Z$456 million (17.5% of total budget) was allocated to education in the 1984/85 budget. In the previous budget, education had the highest vote, accounting for

20% of all government expenditure. An average of about 80% Of this amount was spent on salaries among the three educational sectors; Primary, Secondary and Teacher education. Mutumbuka (1986 p.4). However, the public were alarmed in 1986 when a restructuring exercise revealed that more than Z$30 million of salaries were paid to non-existent teachers. The large number of people involved in the unfortunate misuse of funds, raise important questions about peoples' ideological consciousness and the quality of administration discussed by Cheater. Many of the rural headmasters who handle large sums of money, only did so after independence with little training. Cases of misdirected energies are not confined to public or government organisations alone; there is evidence that all sectors suffer from irresponsible and ill-trained manpower who are not as productive as they otherwise would be with training.

Briefly then, items (iii) and (iv) above have not been achieved. The formal school curriculum is still irrelevant, Cambridge examinations are still the corner-stone of the education system despite the fact that they have now been localised. The teaching of science and technology should be expanded, and that can only be possible if adequately trained or reoriented teachers are put into the schools. Science and technology should be popularised and properly supervised as teaching science is not "easy". Development of management and research is far from adequate and very little research is conducted outside the University. The Science Research Council which is responsible for co-ordinating all research in the country needs to adopt a higher profile than

is currently the case. The issue raised in the previous paragraph indicate the need for efficiency at all levels. A lot of planning has gone into educational provision, but much remains to be done. As donor agencies begin to ask for their contributions back, a more vigilant attempt to conserve resources will go a long way towards making Zimbabwe self-reliant.

The judgements made above may seem rather strong, but it was stated at the beginning that Zimbabwe's achievements will be examined from a self-declared socialist perspective. The facts speak for themselves. Much more work is required before socialism can be said to be the order of the day. What is clear is that material resources are relatively easy to develop provided finance is available but that the human element takes a long time to adjust. There is now widespread youth unemployment.(see chp.8)

Mugabe's call for the University to provide distance education for those in full time employment may be one way of improving and training manpower. That seems to be an urgent need at the moment. Besides, people in employment may be charged full cost for their education. The cost benefits of such an exercise seem attractive, but is it possible? We may need to look elsewhere for examples, but before we do that, a reappraisal of learning, teaching, motivation and communication systems which are vital to distance education will be examined. In chapter 8, we shall review the Zimbabwean experience of this type of learning. At the time of writing, the Commission of inquiry into higher education in Zimbabwe, has tabled its report to cabinet. Its results have not yet been published, but it is suspected that a second university

has been proposed. In chapter 9 we make tentative predictions as to how this new university may contribute to the expansion of distance education.

The above review has shown that there is so much pressure for more student places right across the tertiary level education system. There is also an increasing demand for training and upgrading courses for personnel in industry and commerce. There is no way that the formal or traditional system can satisfy this need under current economic conditions. The use of distance education is being seriously re-examined. (see also Jenkins, 1989).

# PART II

CHAPTER 3


THE CONCEPT OF DISTANCE EDUCATION


"most good ideas are simple and Open learning
is a simple idea"  John Daniel (1988)


The debate about what distance education is, is now drawing to a
close. Many countries now regard it as an important part of their
mainstream strategies for increasing education for those who
would otherwise go without it. But, like formal education,
distance education has evolved and still continues to change and
grow depending on the social and economic milieu in which it is
used. It is therefore important that we discuss in detail and
define here what we mean by distance education, (DE). This
chapter attempts to bring together the various schools of
thought.

A variety of terms which are similar or related to distance
education are used all over the world, only a few are listed
below:

- independent study; (used mainly in the USA ; see
  Wedemeyer, 1981)

- home study; (used in some European countries; e.g.
  Norway, see Holmberg, 1985)

- external study/ dual mode; (used mainly in Australia; see
  Northcott et al, 1985)

- contract learning; (is a form of dual mode, see Hinds,
  1988)

. correspondence education; will be discussed briefly below.

Many other terms are used, e.g. experiential learning, extension studies and so on. Sewart et al, (1983) discuss this issue in detail, we shall therefore confine ourselves to the more current debate on open learning and distance education. In chapter 7, some models using some of the terms used above will be analysed.

As was shown in the introduction, it is generally agreed, among distance education scholars, that the basic DE system has three elements: [1] students, who are separated in space and time from the source of instruction; [2] a teaching organisation, which generates knowledge and prepares learning materials and [3] a communication system which enables the learners to interact with the teachers. (Holmberg 1985, 1986, 1988; Northcott, (1986); Perraton 1983, Perry and Rumble, 1987; Kaye, 1988 etc.)

Communication in DE can be viewed from two perspectives, the mass level, (society-wide, see Macquail, 1986) which mainly deals with the bridging of the gap between the learner and instructor through a variety of mass media: print, television, radio, computers, etc. The micro level (intrapersonal) focuses on the internal structures which facilitate student learning. For example Gagne's (1985) learning as information processing discussed in full in chapter four, is student centred and thus self-motivation and independence are vital traits.

Borje Holmberg, over a period of almost three decades (in 1989) has attempted to merge theory and practice of distance education

through his theory of " Guided didactic conversation", (Holmberg 1986 p.103-132) which stresses the importance of student motivation, carefully structured study materials and advance organisers, (see Holmberg 1988 p.6). Another influential Indian distance educator also agrees with Holmberg, Dewal,1988 points out that:

> In distance teaching, motivation is initiated and sustained primarily by study materials and students support services. Neatly designed and attractively presented instruction packages are the first steps to initiating motivation. Motivation is sustained by appropriate techniques of structuring and sequencing. Prompt student support services, whether in the form of study centres or counselling centres or lending libraries, are yet another way to sustain motivation. Dewal,(1988 p. 70)

Modern distance education has evolved from correspondence learning, which has also adapted to changing conditions in people's lives. It is no longer just concerned with posting learning materials to distant learners.

Correspondence education.

The realisation of the vital role played by motivation rendered redundant a 1979 UNESCO definition of correspondence education which states that:

> Correspondence education is education conducted by the postal services without face-to-face contact between teacher and learner. Teaching is done by written or tape-recorded materials sent to the learner, whose progress is monitored through written or taped exercises to the teacher, who corrects them and returns them to the learner with criticisms and advice. UNESCO 1979 (quoted by Keegan, 1986 p.31).

Of course, the post is crucial to the success of any distance education system but it is by no means the only element as is suggested above. The modern concept of DE includes some element

of face-to-face contact or student support.

The debate as to what distance education is, has largely been concluded, (Sewart,1988) but there is need to reappraise the situation from time to time due to changes to life brought by technology. The early forms of distance education included correspondence education which Holmberg, (1986), traces back to the late 18th and 19th centuries. There is now little argument concerning the nature of correspondence education. As Wakatama notes:

> Correspondence education is a system of education comprising many components especially and methodologically prepared courses, for self-instruction, a feedback from students, an administrative organisation for preparing courses and handling communications with the student. It is a system of education used to bridge distance in space and time between student and tutor or advisor. Wakatama, (1983 p. 119)

Even though Wakatama's definition is descriptive, important issues now underlying the concept of distance education begin to emerge, especially that of "system". There is a shift of emphasis from the instructor to the learner.[1]

The concept of distance also begins to include psychological distance as Wedemeyer (1981) shows. Wedemeyer was a very influential figure in the United States as he attempted to find a generic term for this kind of study which he called "learning through the back door". Independent learning is the term he finally settles for, to include, home study, private study etc. Keegan, 1986 and many other writers, recognise the fact that there can be no one form of distance education.

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[1] A fuller discussion on the issue of student motivation will come in the next chapter.

Distance Education.

There is a wide variety of distance education systems all over
the world. Some are small-scale, others large-scale. Some
are private and others are public. There are some institutions
which are wholly dedicated to distance teaching and others which
cater for both face-to-face and distance students. Current
records held by the United Nations University Information Centre
at the OU Milton Keynes, show that there are about 837 types of
distance education institutions all over the world. (Kaye,1988
p.45). In their study of international distance education, Graff
and Holmberg, (1988 p.8) were able to find double that number,
about 1,640 distance education institutions around the world.

Distance education is now an internationally co-ordinated
activity. In 1938, (Daniel, 1988) "The International council of
correspondence education "was formed in Edmonton, Canada. By
1982, this name was perceived to be no longer generic enough to
cover all the varieties of correspondence education; so it was
changed at the 12th World conference of distance education, held
in Vancouver, in 1982, to, "The International Council for Distance
Education". (Kaye,1988 and Daniel et al, 1982). Many types of
institutions working in literacy, primary, secondary and tertiary
level were thus included under one umbrella. This led Holmberg,
to modify his definition of distance education slightly to
include "all levels", as can be seen below:

> Distance education thus includes the various forms of study
> at all levels which are not under the continuous immediate
> supervision of tutors present with their students in the
> lecture rooms or on the same premises but which,
> nevertheless, benefit from the planning, guidance and
> tuition of a tutorial organisation. Holmberg, (1986,p.2)

Note the key words, planning and guidance and the notion that:

> distance study programmes vary from almost no tutor-student two-way communication at a distance to a great concern for distant communication and dialogue. They also vary from almost no concern for the teaching functions of the distant learning material to extremely elaborated study material, intended to provide all learning support possible within the framework of a study package. Baath, (1982)

Moore, (1973, 1977 and 1983) is more consistent and is also one of the first to include media and the concept of structure and dialogue into a definition of distance education , he points out that:

> Distance teaching may be defined as the family of instructional methods in which the teaching behaviours are executed apart from the learning behaviour, including those that in a contiguous situation would be performed in the learner's presence, so that communication between the teacher and the learner must be facilitated by print, electronic, mechanical or other devices. Moore, (1983 p.75).

One definition which has predicted trends accurately and still stands out unique is the one provided by Peters, (1983). Peters extends the concept of distance teaching/education not only to include the use of technical media but also that of the mass education of students at a distance and the 'philosophy of industrialising the teaching process'.

> Distance education/teaching is a method of imparting knowledge, skills and attitudes which is rationalised by the application of the division of labour and organisational principles as well as by the extensive use of technical media, especially for the purpose of reproducing high quality teaching material which makes it possible to instruct great numbers of students at the same time wherever they live. It is an industrialised form of teaching and learning. Peters, 1973 (modified version 1983 p. 111.)

For some time Peters was not fully understood, ( see Keegan, 1986) as it was thought that Peters' division of labour and

industrialisation concept only applied to course production in distance education. Sewart, (1988 p.8) extends Peters' analysis to include the concept of communications and information and the vital role these play in successful distance education systems. There is a resurgence of the value of training within industry. The success of the Open College UK, (opened in September 1987) in British industry may be an important landmark in the realisation of Peters' and Young's, (1963/88) foresight, about open learning in the post industrial society. Some commentators credit the idea of an open university in the UK to Michael Young's concept of the University of the Air, which led to the founding of the International Extension College, (IEC) in 1963. (Paine, 1988).The IEC co-operated with Anglia Television and colleges of further education and other interested groups from the beginning, Perraton, 1988).

These modifications to the original concept of distance education, have prompted critics to be unsettled, even as early as 1982. David Butts, 1982, p. 25 says:

> Distance learning, in the guise of correspondence education, has been around for a very long time. It was never highly regarded; people thought of it as second best. Cynics might suggest that if you want to boost your sales without altering the nature of the product you simply change the name... Why have educational technologists made such a strong take-over bid for distance learning? Has it been simply a matter of buying up a bandwagon, putting a new horse between the shafts and painting your name on the buck-board?

Tight (1988, p.56) also supports this line of argument when he says:

> Such a claim (referring to Holmberg's and Baath's definitions above) is misguided in my view, partly because

the study of distance education is not yet sufficiently developed, and partly because it ignores (that).. distance education is a set of practices and methods designed to help learners and teachers, whatever their subject...

Tight is obviously straying into current debate about open learning and distance education. A major contribution to the distance education/open learning debate has been by Paine, (1988). To coincide with its 25th anniversary, the National Extension College published a comprehensive book on open learning, which has effectively laid the subject to rest, at least for the time being.

Before we proceed to discuss open learning, it may be useful to summarise what is meant by the concept of distance education, as it is now documented. Keegan (1986) provides the following definition; Distance education:

* is a form of education characterised by the quasi-permanent separation of teacher and learner throughout the length of the learning process.

* has the influence of an educational organisation both in the planning and preparation of learning materials and in the provision of student support services.

* uses technical media; print, audio, video or computer, to unite teacher and learner and carry the content of the course.

* provides two-way communication so that the student may benefit from or even initiate dialogue.

* has a quasi-permanent absence of the learning group throughout the length of the learning process so that people are usually taught as individuals and not in groups, with a possibility of occasional meetings for both didactic and socialisation purpose. Keegan (1986 p. 49)

Keegan's five points can be translated into subsystems of a distance education system as suggested by Kaye and Rumble, (1981

p. 21) and Perry and Rumble, (1987 p. 5). These subsystems will be discussed more fully below. It is important to point out that the use of the systems concept, is merely for convenience; DE has no tight set of subsystems. Whereas, Northcott, (1986) perceives three major elements: Course development, student support and administration, other scholars perceive two , (Kaye and Rumble, (1981) others five, (Rumble, (1986). The important point is that all the vital elements are included depending on the institution's circumstances.

Kaye and Rumble,(1981) perceive two main micro subsystems: [1] the student system which includes student support and evaluation; [2] the courses subsystem with course creation, course production and distribution as elements. Decision-making, control, logistics and the communications subsystems are regarded as elements, which fall within the two major subsystems.

On the other hand, Perry and Rumble (1987), use six subsystems :
- materials design;
- materials production;
- materials distribution;
- support services ;
- system management and record maintenance;
- assessment;

It can be seen that the first two elements can be described as course development. Support services may include counselling. Maintenance of records of the learners, materials distribution, assessment may be viewed as part of the system management. Those scholars who now use the term open learning, also claim the use of all these elements.

Open Learning.

Kaye (1988 p.44) observes that, "the term 'open learning' has become a catchword or slogan in many circles over the last decade". This is partly due to the growing number of distance teaching institutions which call themselves "open". On the other hand there are those like Daniel, (1988 p. 127) who believe that, "open learning exists because people want to learn and want to know". Sometimes, open learning is associated with economic growth and the rediscovery of training as an important part of production. Stonier, (1988 p. 92 ) puts it succinctly when he says:

> the most important input into modern productive systems is no longer land, labour or capital, but know-how and the most valuable asset any country or company has is its human capital. Education adds value to human capital.

Open learning then would, according to Stonier, appear to be a product of the post industrial society, an information society, where change is very rapid and new knowledge comes in all the time. This makes everybody a learner as such, open learning shares all the elements of correspondence /independent study, distance education and other similar terms. What has open learning got which makes it different?

Roger Lewis attempts the following definition of open learning:

> Open learning is in fact an elastic concept...[it] is when decisions about learning are taken by the learner or learners themselves. These decisions may be over a number of different aspects of the learning process, including:
>
> * whether or not to learn
> * what to learn (selection of content/skills)
> * how to learn ( methods, media, routes)
> * where to learn ( the place of learning)
> * when to learn ( start and finish, pace)
> * who to turn to for help ( tutors? trainers? friends? etc.)

* how to get learning assessed ( and the nature of the feed-
  back provided).
* what to do next (other courses? career direction?)
                    Lewis 1988 p. 177.

In open learning, the learners have so much more power, control
and choice over their learning than in a pure correspondence or
distance learning systems or in a normal classroom . The
complexity of open learning stems from the fact that not all
these powers are exercised at the same time, indeed sometimes the
learner may decide to join a full-time face-to-face session for a
short period where upon he/she empowers the instructor to
simplify knowledge "in a similar way as solicitors are empowered
by their clients". Because the learning mix is so diverse in open
learning, the idea of the "continuum" has been developed. (Moore,
1983 p.88; Kaye, 1988 p.46; Holmberg, 1988, Lewis, 1988 and
Tight, 1988.) Diagramatically, the continuum can be expressed
as in figure 3.1 below. Moore, 1983, uses a different and
analytical concept, that of 'structure and dialogue' along a
similar continuum proposed above. There structure represents
constraints on learner power and choice and dialogue meaning
either contiguous or mediated contact. (see Holmberg, 1986)

```
proportion of face-                Proportion of at-a
to-face elements                   distance elements
%                                                          %
100 _____100
    .                                              .
    .                                     _____/ .
  0 . _____/|_____  .  0
     _____/ |
School              conventional           correspondence
classroom           university                    course
```
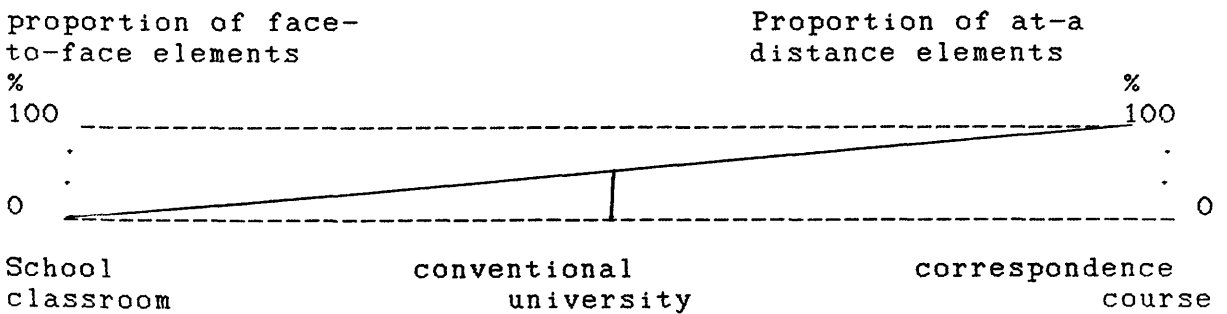
Figure 3.1 Proportion of face-to-face and at-a-distance elements
in different educational systems. (Kaye, 1988 p.46).

In this paradigm, a truly open learning system is shown by three Ns (N N N) Mooore, ( see Sewart et al,1983 p.89). The Ns standing for No structure, No dialogue and No external evaluation. Situations like this are of course rare or non-existent according to Giddens 1984, who says that:

> Structure thus refers, in social analysis to the structuring properties allowing the binding of time/space in social systems... making it possible for social practices to exist across varying spans of time and space. Giddens, 1984.

Open learning institutions are therefore not seamless systems, they do not change the content of knowledge but influence how it is organised. The task for the learner is no longer only focused on the reproduction of facts but on the ability to utilise information for practical value.

Synthesis or Crossroads?

The question as to what is correspondence/distance education or open learning is one to which no definite answer can be given. From the above it is clear that open learning is a much broader concept which makes possible "learning anytime anywhere", for those who need it.

Correspondence study is a small part of open learning, its function is mainly to supply study materials, sometimes with written feedback between the institution and the learner without face-to-face contact. Both the term correspondence study and its practice are now outmoded. Unsupported correspondence study is still to be found in many countries in programmes organised by commercial colleges. The term dates back to the days when the only way to communicate with distant learners was through print, either because no other way was available or because

telecommunications were still developing or were too expensive. Today there are many methods of communicating with distant learners and correspondence education is now mainly a commercial activity (Holmberg 1986, Jackson,1989). As a commercial activity, it has also evolved, as competition from the conventional education sector has intensified, to include the improvement of the quality of materials, distribution and support service.

The most confusion is between distance education and open learning. In his "Manifestoes of distance education", Perraton, (1983) defines the characteristics of DE as:

* Learner and instructor must be apart.
* Possibility of occasional face-to-face integration.
* Use of various media
* There must be an organisation.
* Feedback from the learner to the teacher.

Both Keegan and Perraton are not explicit about assessment and evaluation even though it is implied in feedback. Holmberg,(1988 p.11-12) closes this loophole and includes (explicitly) the evaluation subsystem within distance education. He says evaluation may be formative, summative and economic. The economic dimension is vital to distance education as costs should be kept as low as possible if new learners are to be attracted. But costs should also cover operating overheads, otherwise the institution may be forced to close.

The main difference between distance education and open learning appears to lie in the degree of choice and power of the learner to control his learning. Distance education may be highly structured and in most cases, pacing and cut-off dates for the

handing in of assignments can be frustrating to slow learners. One UZ student commented that there was a need to provide for slow learners in DE programmes; (see chapter,9). Distance education can therefore be said to be a large part of open learning but not equivalent to it, if viewed from a Western perspective. But the line between DE an open learning, if it exists at all, is very thin indeed as a recent Canadian definition will show:

> Distance education is a mode of teaching and learning which, for the most part, allows the student to choose the time, place and circumstances of learning. It requires the design, production and delivery of self-instructional materials and provision for student access to educational resources designed to support independent study. James (1987 p. 13).

In the USSR and China, (Zhou, 1988) and Yugoslavia, (Krajnc, 1988) where distance learning has been an integral part of formal education and work for a long time, the argument does not even arise. Whereas in the West, distance education has always been regarded as belonging to non-formal/second chance education,in the Eastern Block, it is an important part of education. Rather than view the current debate as being at a point where one is either in that camp or the other with different directions for correspondence study, distance education and open learning, these concepts should vary be viewed according to one's socio-political context. Those with very scarce resources (in time and money) may be content with correspondence study; as the economy and extra resources are made available a move towards distance education may be appropriate. Open learning may be the best in countries with advanced communications infrastructure and a high degree of literacy, qualified manpower and support centres. The real debate

should concern the subsystems which make distance education to work. We shall examine some of the subsystems we have mentioned above in more detail.

Systems analysis:

According to Kaye and Rumble, (1981), a distance education system has five subsystems:

.   the student/ support subsystem;

.   the course subsystem;

.   the communications subsystem; (discussed in chapters 5&6)

.   planning/logistics subsystem;

.   decision and control subsystem;

It was mentioned earlier that, Holmberg, (1988) includes a sixth subsystem, evaluation; this subsystem is included by others in the administrative subsystems, as shown above. We shall examine these subsystems and their elements, remembering all the time that the primary function of a distance education system is:

> to provide knowledge or possibility of gaining a
> qualification to those people who cannot or do not want to
> attend full-time face-to-face instruction.
>                                            Holmberg (1988)

Since this study is technology based, communications as a subsystem is discussed in full in chapters 5 and 6, so just a brief account will be given here.

The student subsystem:

The student subsystem comprises, the students or learners themselves and the support services. Various strategies are adopted by institutions to lend students support: some

organisations establish local centres, summer schools, student self-help groups, personal tutors etc. Within the subsystem, there is an administrative mechanism which selects students, allocates them to available courses, tutors/counsellors and provides a general support climate. The method by which assistance is given to learners, depends on who they are.

## Characteristics of students.

Distance education students are heterogeneous and they come from a variety of backgrounds with different starting levels . Because the students are different, distance or open learning institutions have been very keen to find who they are, sex, family, what motivates them, milieu and what they want to study etc.[2] Numerous studies have been conducted on these issues, so we are not going to dwell on them (see for example, Holmberg, 1985 and 1988; Woodley and McIntosh, 1977 and 1980; McIntosh et al, 1976, Northcott et al.(1985) and many others). The main concern of most of these studies has been to find out as much about the students in order to be able to offer relevant courses, provide adequate tutorial and counselling support, as well as seek relevant information for predicting future learning needs.

Admission to many distance education institutions, notably the OUUK, requires no formal qualifications for registration. Acceptance to courses is on a first come first served basis. But

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[2]  The questionnaire for this study, also seeks to find out some of these data. (see appendix A).

many critics argue that the high fees charged tend to serve as a screening device in favour of those who can pay. The average fee for a full credit course for one year, is about £218 at the OUUK. Some science and business courses cost as much as £475 per year. (eg Course P677, Marketing in Action) (Open University, 1988).

The FernUniversitat of West Germany on the other hand offered free tuition from 1975 to 1982. Subsequently fees were then charged. A part-time course costs about £100.00 (DM 300.00). For those following full-time study, normal university entrance qualifications are required, though these standards are relaxed for part-time and guest students. The University of South Africa has a very elaborate admission system where all mature applicants need to apply for exemption from the Joint Matriculation Board which is associated but separate from the university. UNISA charges R160.00 (£40.00) per course. (UNISA, 1986).

In spite of all the political speculation to the contrary, in many Western countries, distance education students appear to be mostly economically advantaged adults and between the ages of 25 - 35 years of age McIntosh et al, (1976 p.72) and Holmberg, (1988 p.2). In developing countries, in Brazil for example, many correspondence students are in the 15 - 20 year age bracket, Holmberg, (1988). Males tend to dominate when distance education is first offerred, but women seem to have caught up in many institutions nowadays. Due to political pressure, in 1975, the OUUK experimented by admitting 500, eighteen-year old school leavers. Woodley and McIntosh, evaluating the experiment, concluded that:

> The younger students fared less well than older students in their first year of OU studies. They were less likely to finally register after the initial three month "provisional registration"... and those who finally register were less likely to gain a course credit at the end of the first year. ... approximately four out of ten younger students who were admitted through the pilot scheme gained one or more OU course credits. However, it seems likely that less than two out of ten younger students will actually graduate from the OU. Woodley and McIntosh (1980 p. 128).

This experience disuaded the OUUK from concentrating their efforts on young school leavers. They have never lowered the entry age for their students from 21.

Support services.

It is generally realised that learning from a distance requires special learning skills and motivation. Student support attempts to minimise the impact of isolation, helps the student to overcome temporary difficulties, lends a degree of personal contact to an otherwise impersonal system and so on. Support services depend on a number of factors:

- availability of finance;
- previous experience;
- qualified staff;
- availability of a variety of media;
- socio-political climate;

Some of the above factors determine whether contact is by correspondence or with a tutor/counsellor. Support could also be provided through individual or group telephone contact, (teleconferences) broadcasting, audio cassette and sometimes through newspapers. The possibilities are only limited by one's imagination if adequate finance, manpower and the communications infrastructure is available.

A recent international study on distance education, (sample

respondents were 297) Graff and Holmberg, (1988 p.55) shows that:

> 90% of the institutions...offer a counselling and tutorial service. It includes telephone service and written correspondence at the great majority of institutions; but also opportunities for counselling by face-to-face contacts (are given) ...

This confirms the view by Holmberg, 1988, that distance students do not learn only from course materials, but need contact with tutors/ advisers either personally or through the use of media. Holmberg further utilises Baath's, 1980 study which points out some of the functions of a student support system in distance education. These include the attempt to encourage, to correct errors, to signal difficulties on the part of the learner, to inform those who prepare educational materials and to allow the learner and the teacher to take off in directions which may not have been foreseeable. We shall examine the operational details and varieties of student support systems in chapter 8, when we shall examine some university level distance teaching cases. To show that student support is vital especially from the students' point of view, we shall leave this section with a quotation from a letter written by a past OU student.

> Dear sir,
>
> ...Except that I can now fill in my PT3 form correctly, I have no idea why I have a Tutor/Counsellor. Surely he/she could initiate some contact and perform two simple but useful functions. a) Welcome me by phone or letter into the system b) Tell me when the course really starts! .. The course units arrive regularly, but I don't know at what rate I should be consuming them... I looked at my returned script and saw several ticks, three brief comments and a grade B. The anonymity of my tutor is hardly reduced nor was my essay 'discussed' in any way which I now realise I had hoped would happen. Teaching at a Distance ( No.10 1977 p.34)

The student went on to raise important issues on tutorials, self

help groups and broadcasts. This just shows how tricky it is to deal with distance students. Some students will want attention, others will want to be left alone as much as possible as long the course units are still coming and their work is being marked. This diversity places a lot of responsibility on the course system and on an institution wishing to cut costs.

## The course subsystem.

The course subsystem is concerned with the creation, production and distribution of learning materials. This system is effectively the teaching element of any distance education institution. It was the observation of its key activities which persuaded Peters, 1983 to declare that, distance education is the most industrialised form of education. It is possible to subdivide this subsystem into subcategories:

- course creation;

- course production;

- course distribution;

## Course creation.

One of the greatest controversies is what actually constitutes a course. Rowntree 1981 and 1982 has contributed to this discussion at length, and says:

> Courses come in all shapes and sizes. The term 'course' can apply to three or four related lessons or sessions or to a whole degree programme lasting several years. Essentially we are talking about a sequence of structured learning with a time interval between each session and the next. It may occupy the student part-time or full-time for half a term, a whole term or two ...

> Perhaps a course stands on its own, e.g., a six-day course bringing nurses up to date... Or it may be part of a programme of studies aiming towards a formal qualification.

At the Open University, the standard course represents one-sixth of a degree... Rowntree, 1981 p.1.

It is important for each organisation running distance education to make sure that all its staff and the students have the same idea of what their institution understands by course. One concept often confused with 'course'in distance learning is the "Module". What usually confuses the newcomer to these terms, is that both the course and the module use aims and objectives. Fraley and Vargas (1974 p.125) have been particularly useful in explaining what modules are as differentiated from courses. They point out that:

> The module approach evolved out of efforts to individualise instruction. A module organised a small number of concepts into a series of instructional activities pursuable by a learner working alone. It [has] limited objectives and [is] sufficiently short so the learner could soon get tested and enjoy a sense of progress.

Fraley and Vargas argue clearly that a module is part of a course but is short enough to keep the learner interested by giving him/her a sense of achievement at every stage. Following Peters'(1983) "industrialised learning" concept, modules for one course do not necessarily have to be produced by one teacher, as is the case in some dual mode institutions, (see Northcott et al, 1985) they can be written by several specialists as required, "Course Teams" as is the case at the OUUK. But most important, Fraley and Vargas observe further that:

> The modular curriculum best fits within the system[s] approach to instruction and guarantees many things to each learner: a relevance to his needs; self-pacing; beginning at his level of knowledge; proceeding at the appropriate step size; assurance that progress is equivalent to the attainment of performance objectives; an easy and simple way to pursue cross-disciplinary studies; and frequent feedback

from testing to certify the learner's accomplishments. These
qualities of modular curriculum are helping to "humanise"
education, a consequence derivable from the fusion of
technology. Fraley and Vargas, (1974 p137).

There are very strong claims, which more than a decade after they

were made have been taken over by distance educators, including

those involved in open learning programmes. Observation of

course design constraints at the Open University and the

FernUniversitat leaves one convinced that course creation in

distance education is a very complex process indeed. (Lewis, 1971

and Perry 1976.)

It is complex because it involves not only many people but

a range of specialists: academics; broadcasters; technologists;

artists; editors; copyright librarians; printers; just to name

but a few. The involvement of so many specialists, has led to the

development of new production and operations management

techniques like: 'Activity Scheduling', Systems Approach,

(Checkland, 1981) Programme Evaluation Review Technique (PERT);

Planning-Programming Budgeting-Systems (PPBS), (Weathersby and

Balderstone, 1972); Critical Incidence Technic; Critical Path

Analysis and many others. (see Kaye and Rumble,1981; Lewis, 1971,

a,b,c and 1973)

Not all distance teaching institutions use these techniques

however, nor the 'course teams' as they are known at the OUUK,

for example. Australian distance educators, pride themselves in

what they see as individualised and more relevant courses

produced by the same lecturer teaching both internal and external

students; the so-called dual-mode. They have resisted any

pressure to change, and have managed to export their model. (for details see, Northcott, 1987; Castro, 1987; Holt, 1987; Juler, 1987 and Siachiwena,1988) In chapter 8, we shall review more closely this mode of distance teaching.

## Course production:

Course production transforms intellectual course creation into tangible learning material. Distance education courses are produced in a number of forms, print and non-print. Often, a variety of media is used in one course: videos, audio tapes, broadcasting, telephones and so on. Chapter 5 and 6 will examine the use and role of media in more detail.

Decisions as to what will be included in a course are usually taken at the planning stage of the course, so that every one involved knows what will be coming or happening next. Kaye and Rumble,1981 and Perry, 1976 discuss this issue in full. Some of the issues concern the OUUK more than other institutions, as the degree of sophistication varies between institutions. But issues concerning the number of copies, storage, market research of potential students, format, amortisation, etc., are universal. But what is often overlooked is what is referred to as "course maintenance" and supplementary materials. Maintenance includes correction of mistakes and sometimes the printing of errata; updating of text to match the syllabus and in the light of students' performance and so on. Supplementary materials include question papers which may need to be changed every year; assignments and due dates which obviously change every year; lists of other students in the area etc. Everything needs co-

ordination and nothing should be left to chance. Large organisations obviously benefit from economies of scale. (Wagner, 1973/77 and Rumble, 1986 )

Important decisions have to be taken in the light of market research, about where to produce the learning materials. Is it feasible for the institution to print its materials or should one employ outside contractors? Detailed investigation should be conducted about reliability of deliveries and the like. The production of non-print materials is trickier and many institutions find it useful to be in partnership with a major broadcasting or production house, Perry, (1976) and Bates, (1984). The FernUniversitat attempts to produce its own non-print materials, but their production has been limited to television broadcasts once a week, on Saturday morning. The Japanese University of the Air, not only produces its own television and radio programmes but it has its own channels as well which enables it to broadcast continuously round Tokyo for about twelve hours a day. The Chinese University of the Air does the same, even though the quality sometimes deteriorates, Zhao (1988). It is the expense of non-print media which has discouraged its use. Graff and Holmberg 1988, show that' written course units are the medium mostly used in all institutions'. The problem associated with the distribution of learning materials, particularly those of a bulky nature, is the one most commonly encountered in developing countries. We shall look at this issue briefly.

Distribution.
Learning materials have to be dispatched at a specific time, not

only to a dispersed student population but to tutor/counsellors in the institution's catchment area. Specimen copies may have to be sent to a number of interested individuals including members of course teams, publicity staff, deposit libraries and in some cases into public bookshops.

This element of the course subsystem is run on business lines, in the normal operations management style, Kaye, (1981). Many things have to be co-ordinated, including transport, staff, postal services ( in some cases maximum weights for each book parcel are enforced, so there is a need to liaise with post office staff) and so on.

It becomes necessary to keep track of the student population as the year progresses so that this department has a way of knowing those students who have dropped-out or have changed addresses so that appropriate action can be taken. At the FernUniversitat, the dispatch department is responsible for even the return of assignments.

The distribution of non-print materials is becoming more and more complex. Details will be discussed in chapters 5 and 6. Open circuit broadcasts are decreasing in popularity, as videos and audio cassettes become more widely available. But audience research strategies need to be improved in order to ensure that the institution has fairly accurate information about what non-print materials to include in their learning packages. (See Kaye, 1981 (p.89-99) for details.)

New technologies (discussed fully in chapter 6) are increasingly

being utilised by distance education organisations in both developed and developing countries. These come in various modes; satellites, computers, telephones, cable and so on. These technologies need careful monitoring and training of staff and students, if they are to be effective. All the above depend on strategic planning or logistics.

Planning:

Burgeoning student numbers and declining financial support for public education has forced academics to examine and adopt planning strategies. (Villarroel, 1988) For more than two decades now, there has been intense activity in an attempt to improve institutional efficiency, traditional and distance teaching. Wagner, (1972/77); Williams, 1972; Lockwood, 1972; Rumble, 1982a/b; 1986; etc. Planning as a subsystem of distance learning systems is now well established, as Rumble has repeatedly shown.

> Planning is the systematic development of activities aimed
> at reaching agreed objectives, by a process of analysis and
> selecting from among the various strategies or opportunities
> that have been identified as being available. Kaye and
> Rumble, (1981 p. 200).

Planning in any organisation is primarily concerned with the future, and depends on whether it is for a new organisation or one which is already established. In either situation, information is vital to the formulation of aims and objectives and their achievement. In order to achieve objectives, and the effective forecasting of the consequences of decisions, planning must be related to control mechanisms within an organisation.

There are many control variables which influence planning in

distance education systems: needs of the country and learners, type of organisation, eg. dedicated distance learning system like the OUUK, or dual mode; availability of infrastructure;fixed assets, personnel, finance and time. Time is a very important commodity in distance education planning; for example it took 40 months and 24 months to plan the OUUK and UNED respectively. (Rumble, 1981). The concept of time is vital in classifying both staff and students as part-time or full-time staff, the amount of time to be spent studying per day/week or per unit depends on the knowledge one has of the students' time geography.[3] (see Carlstein et al 1978). Whether or not it is cheaper to study by traditional means or through distance education, etc. (see Rumble, 1981/84/86/88; Wagner, 1977; Lumsden and Ritchie, 1975 and Muta, 1985).

According to Rumble, 1981, there are 26 key activities in planning a new distance learning system, (p. 211). Some of the activities are common to all institutions and organisations, for example, the formulation of aims and objectives, identification of target population, recruitment of staff etc. Some tasks however need special adaptation to a distance learning system: structure of the academic year; policies for each operating system; storage, costing, identification of tasks to be done and information systems.

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[3] There is evidence that working adult learners have on average, 14 hours study time per week (see figure 9.7b in chapter 9).

Public relations are absolutely vital as part of an information dissemination system, both internally and externally, during the establishment of a distance learning system and for its operational survival. The head of the institution should normally have direct access to this system, for it to be effective. At the FernUniversitat, there is a small department called 'Public Affairs', which has direct access to the Rector. It co-ordinates information provided by the "Central Institutions", Library, Computer Centre, Central Institute for Research in Distance Learning, (ZIFF) and Centre for the Development of Distance Education, (ZFE). It does not matter what this information department is called, it is imperative that it should be an important part of the management process. It is also important that a distance learning system should deliberately identify its various publics in order to effectively target relevant information.

In the events which led to the creation of the British OU, it was not accidental that Harold Wilson chose to announce his vision of a University of the Air, during his campaign in Glasgow, on the 8th of September, 1963 (Perry, 1976) There was already general discontent with the provision of higher education as revealed by the Robbins Commission (Perry, 1976). When the Labour Party went on to win the general election, Jenny Lee, a very powerful member of the Labour Party was made responsible for the project. She made it a personal campaign, and the project succeeded. Even the appointment of advisers and the steering committee was composed of eminent people and scholars. The first

vice-chancellor came from the right 'climate', a traditional university, at Edinburgh University. His appointment was announced at a press conference, which was unprecedented. The importance of the press had been realised very early in the development of the project. In spite of a general adverse outcry by certain sectors of the media, the credibility of the people serving in the committees saw the project through. Perry, who was the first vice-chancellor, also went on numerous publicity campaigns, not only at home but abroad, in the USA and even South Africa (Perry, 1976). Some occasions were reported as memorable too, as the encounter with Margaret Thatcher, then the opposition spokesman for education shows. He says about the meeting:

> Mrs Thatcher, who is a lawyer by instinct as well as by training, came prepared to attack on all fronts. She suggested that our main activity would be to offer courses on 'hobbies'. I fear that I needle very easily and this attack got under my skin in no uncertain manner- as she no doubt intended. The exchanges were sharp, short and furious... Mrs Thatcher went away admitting that not only was she much better informed but that, even if she was not persuaded of the validity of the whole concept, at least the edge of her criticism had been blunted. Perry, (1976 p.30).

That meeting was to prove a lifesaver for the new institution as the Tory victory in 1970, meant that Mrs Thatcher became Minister of Education at a critical time for the institution. We will discuss this matter further in chapter 8, but for now, it is necessary to emphasise that public relations should be an ongoing exercise. Planning goes hand in hand with evaluation and costing of all aspects of the distance learning system. It is important in serving as a check for the realisation of objectives, targets and the maintenance of reasonable costs.

## Decision-Making and Organisation Subsystem:

It is convenient in order to emphasise the central role of administration to conceive of a separate subsystem for this purpose. As we have seen, this function utilises information generated by careful planning in order to oversee the activities of the system as a whole. Distance learning systems are different from conventional institutions, mainly because the clients are scattered around the country. These students are usually adults who cannot attend classes face-to-face. As a result, learning materials have to be distributed to the students to their homes or study centres near their homes. In Canada, North Island College on Vancouver Island British Columbia, has been taking open learning materials to distant learners through mobile vehicles which include a ship since 1977. (Salter, 1982). The key issue is that someone has to take responsibility for decisions and policy matters. The administrative system co-ordinates the various subsystems in order to ensure that they operate as planned.

## Organisational issues:

Holmberg, (1985, p.103) lists a comprehensive set of elements which need special organisational consideration in distance and open learning systems. Some of the services which he says should be incorporated into any system are:

* the development and technical production of distance-study courses.
* the distribution of course materials;
* the non-contiguous two-way communication between students and tutors and counsellors;
* registration and record keeping;
* course certificates;
* examinations and degrees;

* supplementary face-to-face contacts between students and tutors/counsellors;

Most of the points Holmberg raises have been discussed in one way or the other above; we shall however re-examine some of these issues in more detail in chapter 8. Holmberg does not mention staff training and finance in his list. It is felt that these are some of the key issues in developing countries. Restating them here serves to highlight that there is need for conscious decisions in the light of an informed background. Villarroel, (1988 p.57) considers that the 'organisation of distance courses is further complicated by the fact that... the people working on them adopt behaviour patterns based on traditional education, which are not always appropriate to this type of education'. He is also emphatic that high standards of efficiency should be maintained as in any other business. He urges (because of the many people involved) that distance education organisations should adopt a participative style of management used by large corporations in the post-industrial world. This style of management places greater responsibility for day-to-day decision making on local managers, with the corporation looking only after important policy decisions.

The systems approach is suggested as one of the most useful methods of organisation because of the high degree of interaction between a distance learning system and the environment. The key consideration is that these programmes are set up for people who cannot attend full-time or face-to-face classes.

Rumble, 1981 also realises the complexities of managing a

distance education system, and suggests a strong use of strategic plans. Rumble points out that 'distance education raises managerial problems of a high order. It needs extensive research and strategic planning to make effective use of the media available.' He further calls for serious attention to the effective co-ordination of materials development and the geographical location of study centres. Because learning activities are difficult to manage and because students are far apart in some cases, the motivation of students and the development of methods to keep them motivated are seen as paramount. This project takes that view too, and as such chapter 4 is dedicated to the consideration of learning and motivation of independent learners. "The management of the learning process requires the creation of a complex and interdependent system which needs constant administrative attention and teamwork". Rumble, (1981 p.182)

Decision making:

Decision making is a crucial part of any management function. Various models of decision making and management for DE have been developed Rumble,1986. The model adopted should be both economically and politically acceptable if it is to succeed.

The model which will work effectively in each milieu depends on many factors. The most important of which being: the pressures on the existing education system; political climate; state of the economy; existing communications infrastructure and the availability of manpower.

Rumble, (1986 p.161-181) discusses in detail various educational management models:

- analytical-rational model;
- pragmatic-rational model;
- hierarchical model;
- the collegiate model;
- political model;
- the organised anarchy model;

Analytical-rational model which works on the assumption that management is a process "which involves the rational and systematic analysis of situations leading to the identification of possible courses of action, a subsequent exercise of choice between these, followed by implementation, monitoring and evaluation". Those who subscribe to this view (Checkland 1981, for example) use the systems approach. The systems approach works on a simple principle: that an organisation is made up of interrelating subsystems. When all the parts are working effectively, there is a state of equilibrium. If there is a problem in any of the parts, efficiency is affected. Trouble shooting has to be therefore as objective as possible. Decision making in this model, can be decentralised as each subsystem is working towards specific objectives which serve as objective control mechanisms. Many distance education institutions and businesses use this method; the OUUK and UNED are some of the major examples.

Since the formulation of objectives is not absolute, and prone to differing interpretations, some people prefer the second model:

Pragmatic-rational model. This model accepts that there can be no complete agreement on objectives, so stress is on practical experience of managers. " ..the model presumes that change may be engineered through negotiation and a gradual shift on resource allocation". (see Rumble, 1986). Training and human resource development are emphasised.

The <u>hierarchical model</u> is the most common particularly in conventional universities, government departments and administration in general. It is marked by a well defined authority and rank structure and recognisable chains of command.

The <u>collegiate model</u>: In many organisations where expertise is more important in order to gain influence instead of just experience and length of service, the Collegiate model seems appropriate. Rumble, says that; "in collegiates, authority is subject to rectification from below, members enjoy equal rights in policy making; decisions have to be exposed to possible dissent and members are subject to minimal constraints". Rumble further observes that academic staff prefer this model. Elected bodies rather than individuals are the focus of decision making, direction and control.

<u>The political model</u>: The Marxist perspective or political model perceives organisations as "endemic with conflict; it holds that there is no consensus within organisations as to goals and purpose, therefore authority is derived from personal power. Decisions are arrived at through a process of conflict, some decisions being democratic and others through compromise.

Management is seen as a process of engaging in and regulating conflict through bargaining, negotiation and the exercise of power" Rumble, (1986).

The organised anarchy model stresses ambiguity of goals in order to stimulate creativity and fluid participation of individuals. It survives through the personal influence of individuals with expertise under whom clusters of disagreement or agreement groups crystallise their views and ideologies. Many universities seem to operate deliberately in this way. Distance education institutions can never operate effectively under this model as they need to be more sensitive to changes in their environment.

The various management models discussed above put together with the distance education models also analysed, form key variables in a distance education system. The full picture does not of course emerge until the role of the students themselves and the media have been examined.

## The Communications Subsystem:

Communication is vital in distance education, and indeed to any human activity; it can take many forms. Writing in a different discipline, Saussure,(Culler 1976 p.19 ) sees language as central to communication. In this context, language is perceived as a system of signs which aid effective interaction. (see Eco, 1984 p.16) and Derrida, (1973 p.17-21). As a subsystem of a distance learning system, the term communication refers to much more than just communication technologies, which are the focus of discussion in chapters 5 and 6. It also equally applies to

interpersonal relations, tutoring, counselling, planning, power and control as we saw above. Mcquail, (1986). Because of the nature of distance learning students, communication between the institution and the learners is usually through the mass media. When that happens, new problems of facilitating two-way communication emerge.

Education through the mass media: television, radio, telephones, etc. has been the subject of intensive research, Bates, 1984/87; Young et al, 1980 and Schramm, 1977. In one study, Schramm, (1971) found more than 650 educational media-related studies in both the developed and the developing world . Most of them were attempting to find out if mass media could teach effectively, and if they could teach, which was better. Some of the studies sought to find out methods: of audience research in developing countries, Katz and Wedell, (1971); Low level mass literacy education, many studies by Jamison et al, (1978). eg. Accion Cultural Popular (ACPO) which now has more than 20,000 radio schools, Schramm, (1977 p.244).

Some of the education projects including the one of the mass media, were more ambitious and attempted national educational reform. Young et al, (1980) have a directory of 100 such projects in the Third World: the most famous being in Niger, 1964; American Samoa, 1964; El Salvador, 1969; Ivory Coast,1971 and Republic of Korea,1973. (See Young et al,1980 pp162-233 and Schramm, 1977 p. 141 for details.) Some projects tackled the use of media as a supplement to school; numerous examples are available from Young and Schramm's studies. In the late 1970s

attention switched to non-formal and tertiary education as universal primary education had been achieved in the majority of developing countries. The advent of "open universities" in the seventies led to intensive activity and projects at university level. The underlying message about use of media in education was clear, it was that:

> The media of instruction, consequently, are extensions of the teacher. A teacher writes the textbook. A teacher programs the computer for instruction, or at least specifies how it should be programmed. Behind an educational television program or a teaching film there may be a whole team of teachers, producers, camera operators... A teacher may be a fieldworker... he may be a professional film maker or television producer.. [and not the radio,television or other audio visual aids as was once thought]. Schramm, 1977 p.13.

Communication in a distance learning system entails instructional and operational functions. We shall examine how far we can make the source of instruction more accessible in later chapters. For the time being we shall leave Schramm,(1977 p. 276) to sum this section up, as he observes that:

> As more and more teaching becomes multimedia,.. media tend to be looked at in a different way than they were twenty years ago. At that time, educators and prophets were thinking in terms of the medium, rather than a combination of the media. The trend now is to think of a combination of the media able to do different things and contribute to learning in different ways. In no effective distant-teaching projects is one medium given sole responsibility...

Evaluation Subsystem:

> The term 'evaluation' denotes different things in different contexts. Sometimes it refers to the assessment of students for the purpose of awarding marks; sometimes to the judgement of complete educational systems. Holmberg, (1985 p.111)

As was the case with communication, evaluation as a subsystem is

part of the management, control and information functions, but it is so vital that it deserves separate treatment. Even though the role of evaluation has long been established, Parllet and Hamilton, (1972), (mentioned at the introduction) introduced an important new perspective which perceives "evaluation as illumination".

Parlett and Hamilton, (1972 p.15 ) point out that illuminative evaluation comes in diverse forms." The size, aims, techniques of the evaluation depend on many factors: the sponsors' preoccupations,... number of institutions, teachers and students involved; the level of co-operation and the degree of access to relevant information..."

They further point out that 'illuminative evaluation is not a standard methological package but a general research strategy. It aims to be both adaptable and eclectic'. The problem defines the methods. In a distance learning system, everything needs to be evaluated at some stage, including entrance and exit criteria by students in entering and leaving the system, (Perry, 1976). Some of the evaluation techniques evolve with practice, as was the case at the OUUK.

Assessment of students' progress is vital in a distance learning system in order to give students feedback so that they know how they are performing. Because it is thought that the speed at which assignments are returned to students, serve to stimulate motivation, (Northcott, 1987) a number of studies have focused on this issue. In distance education, assessment and testing are

important to both the teaching system and the learner because of the open nature of starting levels. At the macro system level, evaluation helps organisers to:

. check if the target population is being reached;

. use effective costing procedures;

. see whether various media are serving their purpose;

. assess if outside contractors and consultants are up to expectations;

Course evaluation is one important function of the evaluation subsystem. Formative evaluation should go on all the time in the courses' lives until they are amortized. Formative evaluation should raise data on relevance, timing, access and so on. Holmberg, (1985 p. 111) points out that summative evaluation is not what distance educators are interested in as they are usually concerned with evaluating how well the course helps students to attain their objectives of study and how it corresponds to their requirements and expectations. But of course summative evaluation is needed for final certification at the end of the students' courses. Caution needs to be exercised in the choice of evaluation systems as Rumble points out:

> Evaluation takes place at a number of levels, informal, global, highly specific... There are a number of techniques available. ... Illuminative evaluation may help in internal evaluation and also in the evaluation of group activities,but it is of limited use in respect of evaluating mass home-based systems. Rumble, (1986 p.218)

Distance Education in transition.

Adaptation and relevance are key features of distance education.

The message which has come through from the above discussion is that the question of what is and is not distance education is a lower order issue, of secondary importance; if anything it has been answered satisfactorily. What is important is that the world is entering a new phase of structural unemployment, and changing working patterns, Rumble,1988; new definitions of work and knowledge, which require the school to move to its clients rather than vice versa. Learning at a distance is no longer just for giving a "second chance" opportunity to adults, it is now an important commercial activity in technological societies; it is life.

Distance education, open learning, independent study and so on are there to cater principally for the learner who is separated in space and time from the source of instruction.As shown above, a macro distance learning system is made up of a teaching institution, learners and a communication subsystem. The micro system can have six subsystems as described. Definitive statements about what is not distance education include:

. open learning;

. non-traditional learning;

. external study;

. extension study;

. contract learning and experiential learning;

The list above was given by Perry and Rumble, (1987 p.2) and may be regarded by many as being unsympathetic to different socio-economic milieux in which many institutions and learners find themselves operating. At worst, it may reflect a completely one

sided view of a dynamic concept. Moreover, Graff and Holmberg, (1988) show that the main reason for distance education is:

> [the] widening of educational services to include new groups among adults [as] the most important goals of most organisations studied. They often stress innovative approaches and the dissemination of new technologies as another important aim. Graff and Holmberg, (1988 p. 90)

The differences given above between the various terms and the subsystems of distance education may give general guidelines for those who want to educate people 'any time anywhere', without the need to attend physically. If a learning system can do that effectively, and achieve the learners' objectives, then they are engaged in distance education. Open learning utilises a variety of student support techniques as shown above, which should not be confused with the general principle that "learner and teacher must be apart". This in turn raises questions about how to keep learners motivated and how to get messages across; chapter 4 will address the question of learning and motivation in social isolation.

CHAPTER 4


LEARNING AND MOTIVATION IN SOCIAL ISOLATION


Independence in learning is closely connected with
independence in other adult activities.
(Ana Krajnc, 1988)


The purpose of this chapter is to consolidate and highlight three dependent variables in distance learning, the subject of which was raised only briefly in chapter 3 , these are: [1] the impact of isolation of distance on learners; [2] learning in isolation; [3] motivation to learn in isolation.

Among distance educators these are some of the oldest issues to be recognised as affecting the provision of student support services. But there is still a lot of controversy among scholars as to what constitutes good practice. At the bottom of this controversy is the fact that every one agrees that distance education is a highly individualised process. If learning in social isolation is an individual process, what have we to worry about if objectives have been set and learning materials have been delivered?

Fresh evidence seems to be slowly emerging that educators and learners may have differing perceptions of education and learning. (see Krajnc, 1988). In his strong rejection of the teacher centred approach to learning, Freire, (1971 p.45) calls it "the banking concept of education". The response to this

charge has been a strenuous reappraisal of learning, and a sharp swing towards the student centred approaches, (Rogers,1986). We shall examine the implications and the basis of this swing later on. For now, we shall look at social isolation, which has been the subject of much debate ever since distance education was accepted as an alternative way of learning.

## Perception of social isolation.

Well aware of the research which has been conducted on this issue, Krajnc, (1988) has come up with a refreshingly new appraisal of social isolation in distance education.It has, for some time now been acknowledged that distance and open learning is an integral part of higher education in "Eastern Bloc" countries. Krajnc tells us why this has been so in Yugoslavia, and discusses many other issues and research of general interest to distance education.

Ana Krajnc, (1988) argues that our perception of distance/social isolation depends on our concept of education in the first place. On page 9 of her paper, she lists a familiar[1] division of two differing concepts of education, one which is teacher centred and the other student centred. For example, in the first concept, education is viewed as teaching; while in the second concept, education is perceived as helping others to learn. Where education is perceived as teaching by the learner, the learner

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[1] see Bloom's Taxonomy of educational objectives, (1964) and Whitehead,1932.

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becomes dependent on the teacher and 'basically loses self-confidence', Krajnc,(1988) and Dweck, (1986). Other conflicting schools propose that, social isolation disturbs learning because the learner cannot interact with other students and yet some feel that social isolation can be sufficiently mastered, through the careful design of study materials (Holmberg, 1986). King and Forster, (1985) claim that systematic student support can be very helpful to students and minimise the feeling of isolation:

> Student support should be as consciously planned as any other element of the program... As far as possible, we need to be conscious of what we, as educators and other representatives of our institution do to students. The consistency with which support practices are genuinely helpful to students is likely to be a function of such practices being an intentional component of the distance program. King and Forster, (1985 p.100)

Krajnc (1988) also feels that social isolation can be minimised but adds six other elements which contribute to either the learner or the educator perceiving isolation as existent or non-existent. These elements include:

- the quality of other social relations the learner may have;

- frequency of these relations;

- satisfaction of basic social needs;

- past social experience and cultural background;

The issues just raised are associated with external variables; and yet Holmberg (1988), adds another dimension: the question of the internal structures which facilitate student autonomy. Clearly influenced by Ausubel's "Cognitive school", (Ausubel,1968) the extrovert /introvert and the learning and cognitive styles have now been brought into the debate about

learning in isolation.

A number of experiments have been conducted from various angles
and Krajnc concludes that:

> The effects of learning in isolation are relative and differ
> greatly. They depend a great deal on students' expectations
> and their basic understanding of education. If students
> expect direct social relations, then they will miss them; if
> not they will not miss them to the same extent. If they
> believe that somebody must teach them, then they are
> hampered by social isolation. On the other hand, when their
> initial expectation and idea of learning is independent and
> self-directed learning, their learning will continue to be
> efficient even in social isolation. In extreme cases
> isolated individual learning may even be psychologically
> rewarding. Krajnc, (1988 p. 11)

Because social isolation is caused by many factors: disability,
imprisonment, ( see Rhodesian case as discussed in chapter 2 )
physical distance from source of learning and so on, it is
inevitable that distance learners will come from all walks of
life. It becomes vital to attempt through careful counselling, to
minimise the effects of this type of learning on those who may
not be familiar with it. The media have been used as well as the
usual face-to-face encounters to minimise isolation. At this
point, we should ask two important questions: is learning a
dependent or independent variable? Can it take place in
isolation?'

The learning process:

Evidence above shows that it is now generally accepted that
learning and teaching strategies are not only influenced by
psychological factors, but above all by socio-economic
circumstances . (Baath, 1982) This realisation has led to the

use of several approaches towards understanding the learning process. Some theorists have adopted the behaviourist's view, as exemplified by Skinner, (1968). Ausubel and others have championed the cognitive dimension of learning, while Freire, (1971), Brandes and Ginnis,(1986) and many others prefer a student centred approach; somewhere in between the Liberal and the Ultra/Radical view discussed in chapter two. There are many and divergent opinions on what is regarded as learning. Here we will focus on the information processing model and the cognitive view-point as advanced by Gagne, (1985) and Ausubel, (1968) respectively.

In the past there has been an overemphasis on the differences between various standpoints taken by learning theorists, instead of concentrating on the unity of their arguments in an endeavour to understand human learning. The direction taken by Krajnc's research efforts seem to be a welcome holistic approach to learning at a distance. Osborne,( 1985 pp.26-32) also reviewed more than seven theorists in an attempt to find one which suited distance learning. Unfortunately, he leaves the important issue of learning in social isolation hanging. Baath, (1982 p.37) is more willing to take the risk, and gives a clear indication of each educational theorist's standpoint. Skinner's emphasis on the behaviour control model earns him the comment from Baath, that:

> Skinner advocates an extreme form of behaviourism. To him, learning equals acquiring new behaviour. Behaviour is seen exclusively as responses to stimuli in the organism's environment. Therefore, teaching must mean an extremely strict control of the learner's environment.
>
> (Baath, 1982 p.37)

That Baath's observation on Skinner's thoughts may be accurate, is reflected by Skinner himself when he writes on learning, he describes the process below as:

> Once we have arranged the particular type of consequence called reinforcement, our techniques permit us to shape the behaviour of an organism almost at will... simply by presenting food to a hungry pigeon at the right time, it is possible to shape three or four well-defined responses in a single demonstration... extremely complex performances may be reached through successive stages in the shaping process, the contingencies of reinforcement being changed progressively in the direction of required behaviour. Skinner, (1968 p.10).

In distance and open learning, this is clearly not what is desired, as the learner wants to learn in order to solve his own problems, some learners would obviously be put off if they felt that they were being "robotised". Both Baath and Osborne find Skinner's model of limited value to distance learning, but that it may apply to certain forms of knowledge, particularly psychomotor skills. Indeed, Skinner has been very influential on earlier forms of programmed learning, (1960s) which also relied on self-instructional materials and the use of clearly stated objectives.

Even though the term 'programmed learning' is shunned by many, Skinner's strategy for programmed instruction is very similar to many distance learning materials, as they also demand students' involvement in learning activity as well as feedback, as evidence that learning has taken place.

Bruner and Rogers are two of the names which are often quoted in literature on distance and independent learning. They adopt

differing but complementary forms of behaviourism. Rogers, (1969 p.153) advocates 'facilitation learning', where the learner more or less chooses what he needs to learn, when he wants to learn and so on. Quoting from his own experience, he says:

> I have come to feel that the only learning which significantly influences behaviour is self-discovered, self-appropriated learning.

Bruner, (1968) on the other hand advocates use of learning sign-posts and learning materials, developed around key concepts of the topic being studied; directed discovery learning . Bruner's work was reinforced by that of Pask, (1976a/b). Further discussion on Pask's work will follow, when we discuss learning styles later. Baath, (1979/1982), Rothkopf, (1968) and Holmberg, (1985) have attempted to translate Ausubel's and Skinner's theories into the design of written learning packages. Before we proceed to discuss Ausubel's views in detail, we shall look at Gagne's information processing paradigm.

## Learning as information processing:

Learning is a complex activity. Much still remains to be done in order to understand fully what occurs in the human 'machine' in order for learning to take place. The quest to discover conditions for meaningful learning is inextricably intertwined with an understanding of the learning process. Gagne, (1985 p.71) seeks to show the flow in figure 4.1 below.

Like Skinner, Gagne believes that learning is a change in human disposition or capability that persists over a period of time and that it is not simply ascribable to the physical process of growth. This view proposes that humans learn through their

and Hulse (1971) in verbal units or meaningfully organised propositions. According to Gagne, one of the remarkable features of short-term memory is the function he terms "rehearsal" which facilitates silent mental repetition. This process allows short-term memory to store items for longer than could normally be possible without repetition. It would appear that the learning 'flow' in the information processing model is similar to the general communication model proposed by Mcquail, (1983) and other information theorists. This similarity has led critics, Schramm, 1977, to claim that processing any information is an act of learning.

What is vital to distance learners, is the fact that short-term memory has a limited capacity. Krajnc, (1988 p. 15) observes that some distance learners dropped out of courses if individual study units were too large, and they could not cope. Alternatively, students sought face-to-face help and attended short courses, which helped them to structure the program they had to master.

Some suggestions indicate that, once stored in the long-term memory, information lasts for a long time, sometimes for a lifetime. (Eysenck, 1983). Under this view, forgetting may be viewed as intermittent interference between newer and older memories. This interference may block accessibility to required information. Interference is usually experienced during the information retrieval process. In order that information be retrieved, cues are required either externally or internally. If required information can be retrieved, Gagne considers that learning has taken place. He further believes that what is

retrieved is then returned to the short-term or working memory for use, "or it may be transformed to activate the response generator, which provides an organisation for various human performances". ( Gagne, 1985 p.73)

To recall information stored over a long time, complex as yet unidentified processes may occur. Bruner,(1968) believes that there may be a need for reconstruction of events to be remembered rather than merely reinstating them. It is during this process that a variety of senses may be used. Should the problem situation encountered require a new information mix$^2$ of already learnt material, new strategies of learning may be adopted.

If the situation or information recalled warrants action, this is possible through the response generator, (see figure 4.1) which classifies and chooses the response channel, speech, muscles, hand and so on. When the choice has been made, the sequence of events is organised in the most efficient manner for the task at hand. In Bloom's taxonomy of educational objectives, the three prominent domains, "affective, cognitive and psychomotor", would each clearly demand different information organisation and co-ordination of performance. When information has been correctly

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$^2$ A new information mix, is required to deal with new and novel situations. This is sometimes called 'the transfer of learning.
                              Ausubel,1968 p.534.a

retrieved, there is positive feedback as Gagne shows:

> Learning is a process that appears to require the closing of a loop that begins with stimulation from the external environment. The final link of this loop is an event that also has its origin outside the learner... This is the event that provides the learner with the confirmation or verification that learning has accomplished its purpose.
>
> Gagne,1985 p.75.

Feedback serves as both an external check as well as a learning fixer which reinforces what is learnt for storage in the long term memory. Reinforcement can and is usually through rehearsal, a phenomenon mentioned above. It is also through feedback that the individual and his/her milieux confirm or reject that learning has taken place. If, for example, learning entails displaying a particular skill, (as is often the case in distance learning) such as ability to walk, the individual should demonstrate an ability to actually do so before it can be confirmed that "he" possesses the skill to walk.

## Meaningful learning:

The cognitive view to learning distinguishes between meaningful, rote, discovery and reception learning . (Ausubel,1968) Most of these strategies are well documented and do not need further explanation. (see for example Entwistle, 1983 ) However distance educators are interested in reception learning, where the learner acquires knowledge with the aid of well structured oral or written presentation. (Holmberg, 1985) Teaching then has a specific task as Ausubel points out:

> A central task of pedagogy, therefore is to develop ways of facilitating an active variety of reception learning characterised by an independent and critical approach to understanding of subject matter, this involves in part the encouragement of motivations for and self-critical attitudes

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toward acquiring precise and integrated meanings.
                                        Ausubel, 1968 p. 89.

Whereas Gagne only states that information is recalled during the
retrieval process, Ausubel believes in the sub-sumption theory of
meaningful verbal learning and retention. From a distance
education perspective, Baath,(1982) comments that:

> Meaningful knowledge emerges through a process by which the
> new material is incorporated within an individual's
> cognitive structure... by subsuming the new material under
> general ideas or concepts in the existing structure.

In preparing learning materials for distance learners, extra care
is called for in identifying existing learning structure. Ausubel
(1968) and Holmberg, (1983), propose the use of "advance
organizers", in order to serve as a gauge for the starting level
and as anchors to material to be learnt. Inductive integration of
learning material is the basis of this approach.

Rothkopf, (1971), has attempted to translate Ausubel's views into
a strategy for writing distance learning materials through his
"mathemagenic" theory. (see pp. 294-5) In brief, Rothkopf agrees
with Holmberg's (1985) theory of "guided didactic conversation",
which seeks mediated dialogue, through print, with the learner
and he says:

> Experimental questions inserted into a passage at regular
> intervals, and relevant to materials that have just been
> read, can have a general facilitative effect on what is
> learned from a passage. Rothkopf, 1971 p.294.

Rothkopf sees the use of typographical cues, such as underlining,
colour and page layout as vital in controlling mathemagenic
behaviour. But there are other internal mechanisms which affect
learning, the individual's learning style.

## Learning Styles:

The cybernetic nature of information flow in order for learning to take place is generally accepted in learning theory, and many people would be happier if that was all that was involved in learning. Unfortunately, the whole learning structure is complicated by what are called by various writers: "idiosyncratic style" Moore, 1977; "cognitive style", Entwistle, 1978; "dialectic", Brookefield, 1982 and many other such terms.

The diversity of the arguments indicate the complexity of understanding what goes on beyond mere reception. Pask,(1976a/b) has attempted to explain cognitive structures through laboratory experiments. Pask locates learning within conversation theory; which describes learning in terms of conversations between two representations of knowledge, the learner and the teacher. In conversational theory, learning has to be demonstrated by applying knowledge acquired in an unfamiliar or new situation. Of particular interest to distance learners, is the fact that:

> Learning need not , however, involve an interaction between the cognitive structures of two people. The student may converse silently with himself in trying to understand a topic, or he may interact with a formal representation of the knowledge structure and supplementary learning materials which have been specially designed to facilitate understanding of the chosen subject matter area.
> Entwistle, 1978 p. 255.

The concept of surrogate tutorship in the internal structures of the student, may mean that the external tutor may be dispensed with. If that is true, then Ausubel's advance organizer and Pask's "entailment structure theory", has major importance for distance educators as it is now known that these internal

structures are different from individual to individual, (idiosyncratic style). Pask ascribes these differences to two classes of mental make up, holists and serialists. We shall look at these briefly

Holists/Serialists:

> The holist has many goals and working topics under his aim topic; the serialist has one goal and working topic which may be the aim topic. Pask, 1976b p.130.

Pask claims that there is evidence that some people are cognitively either of a holistic or serialist inclination in the way they learn. Holists (he claims) assimilate information from many topics in order to learn the target objective. Krajnc, (1988), ascribes the same ability, to learn from many sources, to self-confident students. The difficulties Krajnc discovers with this group when learning at a distance, is that they easily lose concentration. Pask, tries to explain this situation by sub-dividing holists into those who can create new knowledge from the various sources and topics they use to solve a particular problem and those who merely reorganise it. He also encounters a further problem; that only very few individuals are completely holist or serialist. The major challenge then seems to be to provide the learners with materials that suit their preferred learning strategy.

Serialists on the other hand learn in a linear fashion moving to another topic only after they have understood the topic at hand. Serialists prefer to work along a clear chain of topics and sub-topics .

Some scholars take the "individual differences" in personality as major learning variables. The extrovert/introvert stance discussed above. (Eysenck, 1983 and Krajnc, 1988). Eysenck (1983 p.170) believes that:

> Individual differences in personality may be conveniently divided into two groups, namely those relating to temperament and ability are involved in human learning.

On extroverts/introverts, both Eysenck and Krajnc believe that they learn differently. Extroverts are said to perform better if the "discovery method" is used. (Bruner, 1971). Extroverts learn better than introverts when the direct teaching method, (reception learning) is used. Ausubel, (1968).

The concept of individual differences is of course a paradox when viewed from a non-psychological perspective; on the one hand, societies everywhere are moving towards egalitarianism as their publicly stated objective. "People are equal, people are the same whatever their creed ", and so on. But within that openness, democracy, glasnost or whatever you may call it, individuals demand individual identity and claim to be different from everyone else.

To move back to the psychological consideration, Riding and Dyer (1983 p. 275-279) have confirmed what is generally known, seven different learning styles; The field independence/dependence and the leveller/sharpener, in their analysis compares favourably with Pask's (1976) holist/serialist categories discussed . There are also positive relationships with Ausubel's cognitive styles and Krajnc's, concept of the self-confident/dependent learner.

Riding and Dyer are aware of this and point out that, "several studies" have found out that introverts are imagers/serialists and extroverts are verbalisers/holists. This seems to give validity to Krajnc's study which focuses on the degree and type of social isolation as key variables in distance learning. We shall explore this matter further by discussing motivation.

## Motivation to learn in isolation:

One of the key characteristics of distance learners is that they do not have to learn, they only learn if they want to, and for a variety of reasons. This was one unifying thread between Keegan, 1986, Holmberg, (1988) and Lewis,(1988) as we saw in chapter four. Research by Krajnc, 1988 and Graff and Holmberg,1988 show that motivation is an essential part of learning at a distance. Motivation in learning has of course been studied for a long time,(see Deese and Hulse, 1958), but in the following paragraphs we shall be concerned with one or two new issues concerned specifically with distance learning.

The social-cognitive approach has facilitated the identification of two vital motivational patterns which influence independent learning: adaptive and maladaptive motivational patterns. (Dweck, 1986) Motivational patterns are adaptive if they promote the establishment, maintenance and attainment of personally challenging and personally valued achievement. On the other hand, they are maladaptive if they lead to failure to establish reasonable, valued objectives.

Krajnc's analysis is more straightforward. She looks at the person's attitude as shown by self-confidence or lack of confidence. She argues (p.20) that people who lack self confidence "show rigidity and fear of taking any risks in all circumstances". Because of this, they are unable to compensate themselves by finding contacts when they are learning at a distance. Ironically, these are the people who most prefer to study at a distance, even though chances exist for face-to-face instruction. The reason is they do not want to concede that they do not know. Their inability to make social contacts makes it difficult for them to compensate for the social isolation implied in learning at a distance, "so their readiness to learn almost completely disappears after a while". (Krajnc, 1988 p.20)

In her research, Krajnc found out that self confident learners reported about problems which might not have serious consequences as they were able to use several possible solutions. (see also findings by Brookfield, 1982 below and responses by some UZ part-time students in chapter 9 ) Among solutions mentioned most, self-confident learners maintained their own friendly relations with experts in the field, met and made friends with people with similar interests as themselves.They also communicated with their relatives in detail about their studies.

Moore, (1977) calls this type of learner, instrumentally independent and observes that:

> A fully autonomous learner is a person who identifies a learning need when he finds a problem to be solved, a skill to be acquired or information he does not have. He is able to articulate his learning need in a form of a general goal

which is differentiated in several more specific objectives, which, are accompanied more or less explicitly with the criteria of achievement. (Moore, 1977 p. 22)

An important contribution by Krajnc is what she distinguishes between "primary/ secondary motivation, which seems to play an important role in independent learning. Elliot and Dweck, 1985, call these motives "Learning" and "Performance" goals respectively. Primary motivation (internal motivation) is more akin to personality as it is that internal drive, enthusiasm and thirst to learn found in most people in varying degrees of intensity. Internal motivation is often very difficult to detect and general personality attributes, like "introvert/extrovert" mentioned above are used. Secondary (external motives) are easier to identify and if they are congruently aligned to internal motives, achievement is greater; if they are not, conflict may arise. Secondary motives may be influenced by a need to earn more money, to improve working conditions, to fill spare time or even to meet new friends as was discovered by Woodley and McIntosh, 1980.

In an evaluation of younger students' drop-out rate, at the OUUK, Woodley and McIntosh discovered how subtle conflict between primary and secondary motives could be. Students who failed their courses resorted to defensive mechanisms when asked why they had failed, even though it was known that the majority of them had found the courses difficult. They noted in their report that:

    Very few students said that they withdrew due to academic difficulties. [But] It seems likely that many may have found

the courses too difficult but were able to explain away their academic failure by referring to other external pressures such as lack of time. Such rationalisation in as far as they take place, protect the self-esteem of the student, and may be seen as an unconscious act...(Woodley and McIntosh, 1980 p.186)

If we take into account that the younger students who were the subject of Woodley and McIntosh study, had "A" levels which were higher qualifications than those held by most adult learners, then Krajnc's research confirms that:

The years spent at school do not help to develop the abilities for independent learning. Krajnc, 1988 p. 22.

The need to be personally independent (socially) in order to learn effectively at a distance is another interesting and new concept Krajnc reports and supports. "Distance education students are (seen to be) much more goal-oriented, determined in their decisions and activities, ready for critical analyses and for taking the initiative with a great sense of responsibility". Krajnc goes even further, to claim that this independence enables distance education graduates to take on management jobs immediately after completing their courses where formal school graduates of equivalent standard have to wait for some time in order to gain experience. If this point eventually proves to be generally applicable cross-culturally, it may be a turning point for management training, as developments in the UK, and elsewhere with MBA courses show:

An institution based course is therefore very difficult to fit in, [talking about managers who have to move around] so the part-time concept has been extended to "distance learning", in effect providing an MBA by correspondence course. Henley has led the field here and has 5,000 managers studying from home - many of them in the Far East.
Cowe, 1988 p.25.

There is further evidence that adult independent learners with the right attitude and "primary-motivation" tend not only to perform better but develop to be lifelong independent learners compared with those who are motivated only by secondary motives. Allman and Giles (1982) use the dialectic principle to explain how adults are spurred on to become adult learners, through an ever increasing quest for knowlege. One would surmise too, that this is one of the issues Maslow may be trying to explain in his hierarchy of human needs theory; the self-actualisation level, for example. Brookfield's research on independent learning attempted to raise this issue.

Brookfield chose a sample of 35 adult learners. 25 of these were independent learners in the true sense of the word, not benefiting from any organisational support at all. On average, they all had been learning for about 22 years. The subjects studied covered a wide range, from beekeeping to philosophy and so on. On the other hand he contrasted their achievements with ten students who were studying at a distance but with institutional support. Seven were OUUK students, two were supported by Colleges of Further Education and one by the International Extension College. The subjects studied by these students varied. Of the seven OU students 5 studied Arts and 2 Science; whilst two of the College supported students studied Sociology and one was studying English.

Brookfield conducted two-hour in-depth interviews with each of the learners in order to find out their problems and the reasons for them studying.

Brookfield's results reveal that all the twenty-five unsupported learners trivialised what would normally be regarded as problems by supported distance education learners. There was :

> the apparent absence, or the relatively insignificant nature of problems faced by the independent learners. ...there was evidence to show that the kinds of difficulties a researcher might label as 'problems' were regarded as enjoyable challenges or interesting diversions.
>
> 'Problems' were not regarded as blocking progress of learning but rather as the absorbing focus of "his" efforts, a source of continuing interest and enjoyment.
> Brookfield 1982 p.28

On the other hand, the ten distance learners who were supported by institutions "showed a much greater awareness of labouring under constraints and limitations. Seven broad categories of difficulty were identified, most of them were concerned with intellectual and temporal demands of study by correspondence". These may be summarised as follows:

* making sense of multi-disciplinary perspectives in course materials.
* dealing with an intimidating workload.
* inadequate study time.
* developing required presentation skills.
* working in isolation.
* fatigue and declining motivation. (attrition)
* the settling of anxieties and uncertainties.

> (Brookfield, 1982 p.29)

Brookfield also found out that those students supported by institutions relied heavily on lecture notes, books and broadcasts which were directed by the institutions. Study materials were regarded by these learners as self-sufficient. On the other hand independent learners placed much less emphasis on material resources preferring instead consultation. "Supported" students hardly mentioned using libraries, independent learners

on the other hand referred to libraries and a number had extensive reference libraries of their own, which were by-products of the learners' enthusiasm rather than a necessary condition for learning.

Institution supported students did not rank highly the need for them to locate and assess relevant sources, as they viewed their course units as self-sufficient. Coupled with this view, these students felt the need for attending tutorials , whereas independent learners referred to "enthusiasts" societies. The point emphasised by Krajnc in 1988, again highlights how important is the role of the family or the learner's spouse.(see chapter 9) Brookfield has a sobering finding, which is that:

> no matter how intensely an individual may want to learn, he/she usually does not do so very actively if the marriage partner objects. (Brookfield, 1982 p. 30)

Dweck, 1986, also concludes in his study that:

> [Independent learners] are challenge seeking and have high, effective persistence in the face of obstacles... in implementing the learning need, the independent learner gathers information he desires, collects ideas, practices skills, works to solve problems and achieves. (Dweck, 1986)

Implications of Brookfield's findings:

Distance educators will be curious to find out why it is that the 25 adult independent learners in Brookfield's study reported that they did not have any problems; they have only challenges. But it must not be forgotten that most of these learners had been studying for a long time without overt external pressure or the need to pass exams. Learning in each case had become part of

their life. They had total control of their learning, and were therefore engaged in open learning. On the other hand, the ten institution supported learners were studying for external qualifications. Seven of them as shown were reading for a OUUK degree, while two were studying for 'A' levels and the other for 'O' levels. The present writer would argue that there is not enough evidence from the report at hand to make conclusive judgements. Perhaps more information on the learner's personality traits eg. introverts/extrovert and degree of social isolation would help in making judgements. This is clearly missing in the Brookefield study.

However, on the question of supported students, Brookfield, raises seven key issues. On his first point, it is indeed confirmed (Krajnc above) that distance students find it difficult to isolate key points from <u>multi-disciplinary course materials</u>. This is where Holmberg's point on "guided deductive conversation" and Ausubel's "advance organiser" become critical. Students learning at a distance need to be led in slowly and deliberately. Care must be taken to simplify course material to the level of the learners. Study material must be broken down into manageable 'chunks', course units at a time, in order to minimise the psychologically <u>intimidating workload</u> found by Brookfield as a critical factor in distance learning. This is where open learning is more useful, because the learners can work at their own pace without pressure. Working towards their own goals and schedules, learners should be able to find time to study, suitable to their own circumstances. The concept of

inadequate study time is then minimised. During counselling and immediately after they register for institutional courses, distance learners should be gently encouraged to work towards simple but specific time goals. This is the most difficult aspect and learners should be warned not to expect instant adjustment.

Adult distance learners are usually very apprehensive about assignments, particularly their first one. It seems from Brookfield's evidence that each course should attempt to assist its students to acquire relevant assignment presentation skills. Adults can be as hurt by what they perceive as unjustified high marks as very poor ones. An OUUK case above was just but one example. More research seems required as to how adult assignments should be marked.

Working in isolation, seems to be a very common problem for distance learners. Krajnc has now observed from her own research that "isolation" can be compensated by other social relations within the learner's environment. Students' perception of education also is important in their view of isolation. In communities which require the service, local study centres and tutor/counsellors may be used. Not all students will use this service even though it is available. These centres seem to help distance learners overcome their initial anxieties and uncertainties, which can come from many sources. These may even include bad experiences about school in the past.

Attrition is a perennial problem in distance learning. Some students develop their own survival tactics; the majority will

need institutional help. The institution can help a great deal if it marks and returns assignment quickly, as Northcott, (1987) has shown in his Australian research. Many methods are used to try and stimulate learners' interest, including use of various media to encourage two-way communication in many forms.

Any research methodology has limitations, which inhibits the blanket generalisation of its findings cross-culturally. Distance education is a complex concept, but even then it may be possible to learn from Brookfield's study, to minimise learning problems; by identifying positive personality traits during counselling sessions aimed at improving effective distance learning.

It was with the realisation of the vital role played by motivation in distance learning that section V of the research questionnaire, (chapter 9) was included. As social isolation is also an important factor to be controlled , if learning has to take place, the rest of the questionnaire attempts through the use of strategic questioning to find out to what extent social isolation and the six other problem areas raised by Brookfield are to be found in University of Zimbabwe part-time learners and how their effect can be minimised.

Before we can examine some of these issues in chapters 9 and 10, there is need to go back and highlight the communication subsystem which is a vital part of the course subsystem. As teaching in distance education is mediated, through print and other media, we shall find out how student isolation is minimised through the use of various media.

# PART III

CHAPTER 5


COMMUNICATION AND EDUCATIONAL TECHNOLOGIES


Introduction.

Technologies in education have certainly not delivered all that they promised: The teacher has not been replaced by the computer; radio has faded into obscurity as far as broadcast learning material is concerned; even the much acclaimed television is not yet universally available, contrary to popular belief in the 1960s. With this in mind the present chapter will examine new perspectives in instructional techniques of the dominant media, print, audio cassettes, radio, television. As Bates, (1984) has provided a comprehensive work on contemporary distance education technology, we shall review these media only very briefly. The discussion below will attempt to draw together some of the more theoretical issues raised in chapters one and three.

As is now well known, no single medium possesses all the attributes required for creating the ideal learning environment for distance learners. It was therefore necessary in the previous chapters, to spend some time examining the concept of distance education, independent learning, the process of learning and motivation. It is also recognised that media can only be effective if they are relevant to specific learning objectives.

If not well integrated, media will not be as effective in

facilitating learning. Niekerk (1987:23 sums up this view neatly when he says:

> Effective integration of media in a study package should result in the media "disappearing" and the student involving himself in the learning content. ... the teacher in distance education should discard the notion that he is busy preparing study material, what he is in fact doing, is structuring a learning environment.

In fact, it is Ausubel (1968:131) who amongst others, highlights the fact that the media have a greater capacity for progressive integration and differentiation in order for the learning process to occur. This view implies an element attributable to audio-visual media, its plasticity and elasticity. An explanation may be appropriate, since media integration and differentiation have a slightly different meaning from Ausubel's.

Progressive media integration acknowledges the cumulative effect of the development of teaching media: one would instance early use of print and still pictures to convey meaning. As technology which integrated sound and pictures advanced, both still and motion pictures have been increasingly used.

Current satellite use reveals an even more interesting integration of realia, sound and vision. On the other hand, progressive differentiation seeks to identify the strengths of each medium. Audio cassettes may be used for teaching music, print may be used where nothing cheaper is available or where portability of learning material is vital, television may be used to bring the instructor and the learner together, and to show realia which could not have been possible in any other way.

Computers may be chosen in one situation not only for their ability to mix print with vision but also their capacity to be used interactively. Finally, satellites may be attractive in one situation because of the need to connect large scattered audiences as in the well documented Indian SITE experiment, and so the list could go on.

It was mentioned earlier that we shall not be dragged into the now trite strategies of listing the different technologies but rather to examine them qualitatively. That said, it is also necessary to add that this does not mean being complacent about seeking out new technologies which may be useful in distance education. The fact is that in distance learning, the use of media of one kind or the other is indispensable because of the existing gap between the learner and the source of instruction.

It is the indispensability and centrality of media in distance education coupled with the wide range of technologies which ironically cause problems of choice and impair the ability to know which media to use and under what circumstances each medium is effective. It is at this point that elasticity and plasticity of media manifests itself. In this context, elasticity refers to the capacity of a medium to be used intrapersonally (Mcquail, 1986) as well as to connect up with large audiences, sometimes crossing national boundaries. Technological developments in broadcasting, satellite and laser technologies are part of this elasticity of usage. Plasticity refers to a medium's capacity to be contextually relevant. There is an element of multidimensionalism within plasticity, in that an a la carte

media menu depends on one's circumstances:

. the amount of money available;

. availability of resources and existing infrastructure;

. economic, motivational and cultural constraints on students; their ability to afford receivers and their propensity to adapt to the broader organisational environment within which the independent learning has to take place.

In contiguous teaching, media are usually used as learning aids because the teacher is at the centre of learning but in distance education, learning is, in Roger's words, "learner centred and the teacher is only a facilitator". Freire (1971), speaks about the teacher as someone who differs from the student because he acquired experience earlier than the learner, but that sooner or later the learner catches up and thus should be allowed to control his learning. This view, if adopted, has important implications not only for distance education students but for distance learning as well. For example, if the learning is to be student centred, as is often suggested, the choice of a medium of instruction should be responsive to the problem of access to the hardware of reception by all the students. The question of access seems to be so fundamental to distance education that "safe" media have been preferred by course designers to the more glamorous media, namely radio and television. Coffey et al (1987) quite rightly remind us of the perennial problems of the suitability of broadcast times, maintenance of equipment and copyright problems. Perry and Rumble (1987) add weight to the

issues raised above and like Briggs (1987) warn against the
temptation to concentrate on new technologies whose promise is
just unfolding.

After sustained periods of media research, Bates (1987) and
Schramm, (1977) seem to have added another qualitative dimension
which is congruent to Niekerk's (1987) and Holmberg's (1984,
1986, 1987) analysis. Schramm and Bates go even further and
propose a working framework for choosing and studying media.

Bates (1987), seems to be sensitive to the multiplicity of
factors affecting media use including the cumulative
developmental issues. For example, the role of audio in the
fusion of radio and televisual technology. Nowadays, satellites
which can utilise text, pictures and audio are more accessible
for use by distance education institutions. Laser technology has
been much more quickly harnessed than was the case previously.
Education remains the safest place for trying the effectiveness
of new media with little controversy.

A new framework for assessing technologies :

The new framework shows positive signs because it looks at media
multidirectionally, more in the line of Schramm's Big media
Little Media (1977) and McLuhan's(1964) Cold media hot media
distribution. A distinction also needs to be made between
technologies for teaching and technologies for operational
purposes because quite often these are confused.

> technologies for teaching are much more influenced by
> thelikely home or student work environment and therefore have
> to be relatively low cost. Bates(1987:5)

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Once again the question of availability of hardware must be paramount, this has led to efforts to try and improve the didactic quality of media output such as print and audio cassettes. On the other hand, technologies for operational purposes are more likely to be introduced to improve institutional efficiency. Operational activities are what Rumble and Kaye(1981:177) refer to as the Administrative, Course Development and Student Support subsystems. Among the many activities, student registration and records and publishing are important. It will be noted that although cost remains an important factor, a high cost of investment for operational purposes may well be justified in terms of increased efficiency. .The development of LOTSE at the FernUniversitat in West Germany could be a good example of improved efficiency applied to student selection and counselling. Applicants to the FernUniversitat are given a student profile form to fill in and this is analysed by computer which then writes an individual letter to each applicant advising him/her not only of the number of courses (s)he can take but also about the chances of them completing. Evaluation by Fritsh 1984 showed that about 90% of the letters diaognised the students' circumstances accurately and were well received by prospective students. Although this project was expensive, the costs are minimal in real terms if account is taken of the saving in students' time and the speed of the responses to the student. The computer in this instance is a very appropriate technology.

Some technologies are used effectively within the distance education system. There are many examples of this; one could

take, for instance, an internal video distribution system like the one used at the University of Glasgow and many other institutions in the 60s and early 70s. MaClean( 1982:2-3). At the Open University(UK) about 500 students were to be connected by computer to about 100 Tutors/Counsellors in 1988, as an experiment. Bates( 1987). Technology within a distance education system may also involve a variety of media mix including telephones (CYCLOPS) in the case of the OU(UK); television and so on. Some of these media are vital in communication between different distance education subsystems.

International trends in distance education, particularly at University level, point towards greater co-operation between institutions and systems. Media used here seem to be moving away from terrestrial systems into space technology. Advancement in lASER technology is making this possible. Course development can now be a co-operative venture between an academic in the UK and one as far away as Australia. This co-operation is not only bilateral but multilateral using computers and satellites.

Institutional collaboration between Deakin University and the University of Strathclyde on their Master of Business Administration course and Deakin with OU(UK) has been possible through a microcomputer network called a' Public packet-switched network'. This network is simple and easy to use. The user uses the phone. The student rings the local number and asks to be connected to the system which can then connect with anyone in any country that operates a similar network. In this way computer conferencing is possible and documents can even be exchanged

electronically. There will be further discussion of this issue later. In the meantime, it is adequate to illustrate the point about communication between systems.

Finally, consideration should be given to needs between different levels, types of courses and students when choosing media technologies. Decisions made in the light of cost alone are neither useful nor desirable. It is necessary to use pedagogic criteria first, and when this proves too costly, alternatives can then be sought, but sometimes careful market research can help eliminate unnecessary media mix. Monk and O'shea (1981:62) discuss a good example of potential student needs analysis for the OUUK PT501 course in Microprocessors and Product Development. Pre-course development research revealed that students wanted to be in control of their course and needed personal computers rather than broadcasts. So work and effort was concentrated on designing appropriate software as well as a suitable microcomputer which was sold as a package which included six course units and a 200 page experiment book. All the materials were tailor-made for a specific target population which required a good course which they could afford. That about 3,500 of these courses were sold within two years of the launch of the course is indicative of the value, quality and relevance of the course.

Contrast the case study just described with that written by Ansere (1982:54) (incidentally, he reiterates the same views in 1987). The subject of his discourse is Distance education in Ghana and the special problems in less developed countries. He describes his experiences thus:

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describes his experiences thus:

> So far African nations have largely depended upon the
> conventional education system for achievement of goals and
> have devoted increasing amounts of their wealth towards
> that end. The returns, however, have not been commensurate
> with expenditures. [About Ghana Distance Education] The
> Ghanian (sic) distance education programme started small and
> has had a modest rate of development. The course mix and the
> media mix have been kept small and simple. ...Six years
> after we completed all 7 courses the economy of the
> country started weakening, and foreign resources became
> very difficult to obtain. The prices of the few books that
> could be obtained locally were so high that the students
> could not afford them.
>
> In 1975 we were forced to abandon the courses based on
> textbooks and in their place write what we call 'Self-
> contained courses'. [But] however quickly we tried to write
> the new courses we have been unable to complete them... This
> situation brings to the fore the importance of poor
> countries starting programmes on a modest scale. Ansere(
> 1982:54)

What technology is appropriate for Ghana and indeed all
developing countries? What need concern us at the moment, are the
stark differences in student needs and organisational
environments. This issue will be discussed fully in the next
chapters. But the dangers are real. Bates also points out that;

> Technology is more likely in this respect to increase
> inequality between countries than reduce it, as far as the
> provision of distance education is concerned. Bates(1987:6)

There are dangers of increasing the gap between rich and poor
nations or if differentials in standards are imposed, apartheid
type discrimination becomes prevalent leading to national and
civil strife. Where do we draw the line in order to achieve both
equitable and harmonious development? The developing world will
never forget the economic complications suffered by Mexico,
Brazil and many other countries because of being too much in
debt. How then can the Commonwealth canvass for the University

of the Commonwealth for Co-operation in Distance Education? Will the poorest countries benefit in any way beyond the usual experiments by certain enthusiasts? What will be the role of each individual country and that of Zimbabwe in particular? The technologies seem to be holding out more promise than they have ever done. As MaClean observe:

> You see, we have been caught out before by overstating our case and latching on to the irrelevant. MaClean (1982:2)

This was an appropriate warning by MaClean before he retired in 1982. This present study benefits from hindsight and one hopes that we are now wiser. We have identified the elasticity and plasticity of media mentioned earlier but we should add that these media traits apply even more to distance education students who bring into the learning system a wide range of experiences. Some will learn and extend their horizons of knowledge with the aid of appropriate technologies and yet others may feel happy or perhaps they have no choice but to use just text. The milieux are different and sometimes unpredictable : this may lead us to proceed on symptomatic scenarios and agendas while reality eludes us. We will leave the present discussion for a moment and consider each dominant medium on its merits. We shall in turn consider: print; audio; televisuals; video, computers and satellite technology.

## Print media

Who said goodbye Gutenberg? At the height of technological promise in the 60s and 70s, many people were led to believe that we would not only do away with the printing press but that we could discard print material altogether. Of course this has not

happened. What we have seen is not a destruction of text but rather an improvement of both the quality and speed of production. In higher education, which is the main target of distance education, text still accounts for more that 90% of all instructional materials. Even at the OUUK, which uses the greatest media mix in the world, 90% of instructional materials are in print.

The advantages of text are well documented and Rothkopf(1971) has given a worthwhile theoretical framework for the value of text. Text is well suited to his 'mathemagenic behaviours' theory of study material. Essentially, mathemagenic behaviour involves two processes, inspection or scanning of material to be learnt, followed by study activities on the part of the subject. Text, as course units lends itself well to this handling.

Rothkopf emphasises the common issues associated with effective learning materials as:
.    use of quality paper and coulour;
.    portability; (course units are easy to cary around)
.    student has complete control of what to read and when to read and therefore can learn at own pace.
.    typographical cueing can draw attention to important points;
.    economical, paper is cheaper than audio or video;

It is not necessary to repeat all these well known traits of text but rather we shall look at new developments which have reinforced the position of text as a leading learning medium in

both contiguous and non-contiguous instruction.

## Text Processing

The printing press created a publishing culture which has taken on the latest techniques in text processing. Perhaps before proceeding further, there is a need to clarify the subtle difference in meaning between text and print. It may seem obvious but sometimes it is overlooked that these two terms are related but not synonymous. Text refers to the instruments and signs which create meaning; it is a language. Detailed arguments on this issue are well documented in the field of semiotics and socio-linguistics. The arguments are clearly outside the scope of this thesis but it is useful to realise that they exist in order that the unifying role of written language between media is appreciated. Consider Gidden's (1979) thesis that;

> Writing is primarily concerned with creating an opening where the writing subject endlessly disappears. But to study the text is at the same time in a definite sense to study the production of its author. Giddens 1979:42.

Derrida( 1973) also discusses the importance of text and writing, he says, 'writing is more fundamental to language than speaking'. It is the realisation that print is going to be with us for a long time and that it has many advantages over other media that influenced distance educators like Holmberg (1983, 1984, 1986, 1987) to think of methods to improve dialogue in text which view distance education as Guided didactic conversation. Advance organisers are used to prepare the learner for learning new knowledge.

Text processing then may be regarded as putting together a system

of signs which are meaningful when ordered in a culturally and contextually relevant manner. The communication structure is so powerful that computers, electronic mail, and all related media use words and letters which are generally understood at least at the consumption stage. A computer still resembles the typewriter in keyboard and some functions, and the power of television is reflected by the computer screen or monitor. Text is available in non-book form, as on the disk or laser printer but it has to be printed if one needs a hard copy. Printing is therefore a mechanical process which helps create a concrete state of text which is storable.

In distance teaching, electronic text processing seems to be one of the most important developments. Writing in 1987 about technology for distance education in the next 10 years, Bates (1987) predicted that 70% of all publishing in Europe would be carried out electronically but points out some of the traditional techniques still in use particularly in countries of the South. No one can yet foresee how those countries which have not yet reached the present stage of technological advancement will be affected by what will amount to a leap in their development forced on them by satellite technology.

It is now possible to process text electronically cutting out what used to be about three or four stages leading to production. Employment prospects have shrunk in most cases due to the structural changes. The area which seems to have benefited a lot from these developments is editing and quality control. Examples quoted earlier about increasing intra and inter-

university co-operation in course production and information exchange show that there are tremendous advances. Text is still the main form of computer conferencing an exchange of data.

An interesting development is the ability to prepare a document electronically up to the printing stage even though some institutions will still use the usual paste- ups in order to get better quality. Desktop publishing is now a reality not only to commercial firms but to individuals as well, as falling prices make these technologies more accessible to many more people. It is now possible for course team members to work from home rather than go to the office every morning. Important savings in publishing costs have been reported from the Open Learning Institute in British Columbia in Canada where typing and typesetting have been eliminated by asking course producers to present their materials on a computer disk. Briggs(1987)

The Sunday Times newspaper recently(10/04/88) published facts about the costs of books: a book costing £12.95 was used, the breakdown of costs was as follows;

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            Author......... £ 1.29
     Printer/ Binder.........   1.94
     Publisher ..............   3.24
     Distributor ...........   0.65
     Retailer  ..............   5.83
     Total cost to consumer..  12.95
```

As most distance education institutions are also publishing houses, the savings, particularly to students, if most of these stages could be omitted would be as much as 75% of the commercial price they would have to pay in retail shops. Of course

publishers have regulations protecting them like the "Net Book Agreement" in the United Kingdom: this organisation protects and fixes prices of books and can penalise any dealer who ignores them by not giving him books. How much longer this state of affairs will continue seems unlikely, as Ellis (1988) called the practice,"outdated and inappropriate". Recent developments towards scraping the "Net book agreements" are already threatening small book traders.

In his thesis, Bates,( 1987: 9) also foresees a number of changes in publishing practices, particularly in joint production, adaptation of materials not only between institutions but also materials which need updating within the institution on an annual basis. There are also consequences for regional and international co-operation. If copyright laws are not adapted, there is a question about how they would deal with pilfering of electronic text before it is published. At the moment existing regulations do not cover this growing area adequately. There is a need for change because this practice will be both obsolete and redundant soon. What do other technologies have to offer? Let us turn first to audio visual media.

Older audio-visual media:

There is now a wide variety of audio visual media in DE as Bates (1984) shows; but none has had more widespread use than audio cassettes. The widely acclaimed televisuals are still too expensive for generalised use even in the most advanced countries in Europe. The OUUK still remains, after almost two decades, the only institution making substantial use of television and video:

but even at this institution, televisuals account for less than 10% of instructional materials. Why has television not made as big an impact on distance teaching as was predicted in the 60s? There was to be unanimous agreement on why everywhere it was too expensive. Costs of television sets and video have not dropped to a level where they can be easily afforded by most students. A stunning surprise development is in audio cassettes which now prove cheaper than open circuit radio broadcasting. Since audio cassettes have proved to be so useful, it might be an idea to look first at terrestrial Radio broadcasting and Audio cassettes.

## Open circuit broadcast radio:

Broadcast radio bore the brunt of much trial and error research almost half a century ago: (see Schramm 1977) this development spread to less developed countries in Latin America, Africa, Asia and many other countries. Radio got very popular on accout of its heapness. It is still in use in many countries for educational purposes at the community and primary school level. In a survey of about 300 rural primary schools in Zimbabwe, conducted in 1985, more than 80% were found to have radios. (Sibanda 1986) Even though this finding was a surprise then, it served to confirm that radio is much more widely available to poor communities than is generally thought. But it is still expensive to run compared to audio cassettes unless one is broadcasting to large audiences. Bates( 1987) puts the minimum number of students required to make radio viable to about 1,000 students per course.

The limitations of radio are well documented (see Schramm 1977,

and Bates (1984). However radio still has a valuable role in introducing students to new subject matter, transmitting urgent and erratta information to students. Radio also suffers from lack of quality transmission times as far as higher education is concerned leaving audio cassettes as the better medium.

Audio cassettes.

All distance education Universities agree that audio cassettes are the cheapest medium, for example both the FernUniversitat in West Germany and the Open university (UK) have drastically reduced terrestrial radio broadcasts in preference to audio cassettes. Even some part-time courses in universities in less developed countries use them in some of their courses. A case in point is the Post graduate Certificate of Education at the Universities of Zimbabwe and Zambia. The price of radio cassettes has fallen in many developed countries but cassette players are still very scarce in many countries of the South.

Like videotape, audio cassettes have instructional value particularly now that there are personal stereos which can be used anywhere just like print course units or books. An additional advantage is that they can be used without disturbing anyone. There are also plenty of models of personal stereos which have a recording facility which gives the learner control. The learner may be able to record answers to questions, tape these for use when he is travelling and so on.

At the OUUK, research into the use of audio cassettes as an advance on the old filmstrip is under way and there seems to be

a lot of potential for this medium in the future. Cheaper methods of producing videos are being tried: I am referring to the use of audio cassette tape for video recording demonstrated on BBC television programme in 1987. ( "Tomorrow's world")

The major advantages of using audio cassettes found by the University of Waterloo in Canada which uses audio cassettes as an integral part of its courses [James 1987] are:

- economy;

- personalised communication;

- can be naturally prsented in dialogue form as well as complementing written material;

## Terrestrial broadcast television.

There has not been a shortage of research into the effectiveness of terrestrial broadcast television, Schramm and Chung (1976) discovered more than six hundred studies with little difficulty: and yet about six years earlier, Schramm (1970:286) had warned that:

> In the glamour of television, we have under-used radio. We have little doubt that it can do many educational and informative jobs as well or almost as well as television and at about one-fifth the cost.

Though avoiding as much as possible the temptation to repeat what has been said many times before, it may be necessary to pick out by way of example, some of the great advantages of television over the past thirty years. There are very few people who would dispute the fact that:

> ...television has immense power to motivate, illustrate and educate. However , because of its high production cost, most recent applications have been in the enrichment category...given current realities it is not likely that

broadcast television will play a large role in correspondence education... ( James 1987:38)

Bates puts the minimum number of students required per course to make terrestrial television viable at about 500 students. He is convinced though that:

> It will still be valuable for introducing students to a subject, for providing an overview or for raising awareness. ...Broadcasting is an ephemeral medium. This has caused a number of problems for learners... (Bates, 1987:12)

On students' problems about utilising television, he points out the importance of quality transmission times which are congruent to students' time geography. Citing the OUUK as an example, he points out that in 1977 viewing on transmissions averaged 65% but due to loss of the prime time slots (between 17.00 - 20.00) student viewing dropped to about 48% by 1984.

If a medium is not responsive to students' needs and circumstances, it is inelastic and plasticity is reflected in the capacity for the medium to be targeted towards a specific target population. James (1987:38) gives an interesting example of how Americans are trying to get round this problem by using what they call "narrowcasting".

> One recent development enjoying significant popularity in educational circles in the United States is the use of differentiated program channels made possible by Instructional Television Fixed Service (ITFS). This low power form of broadcasting can allow up to four channels to speak to four distinct audiences.... several of them having highly specific educational needs. (James 1987:38)

Narrowcasting is of course similar in principle to cable television which also has not lived to its promise. The

difference being that it has failed on a very grand scale.
Consider the cases of Aberdeen Cable, (commissioned in May 1985
and Clyde Cable 1986) which have failed to capture any
significant number of their target audiences: each service has
managed only 17% and 11% of the potential market respectively;
even though economic conditions particularly in Aberdeen have
been blamed for the failures, evidence in America and other parts
of Europe indicate that cable television has been overtaken by
other technologies. Developments in satellite and video
technology have led to cable's demise. There are now strong
indications that distance educators prefer audio visual materials
which students can control by making them as interactive as
possible. But interactivity does not guarantee higher order
learning particularly at University level; there appears to
be an element of reflection and what Ausubel (1968), terms deep
level processing Can video technology increase students'
learning?

## Video

In order to circumvent the limitations of terrestrial
television, many institutions now prefer to use videotape and
videodiscs . These are flexible enough not only to facilitate the
use of television in a non-broadcast manner, but also to be
tailor-made to suit students' needs. It allows the learner to
control the ephemeral nature of broadcast programmes as they are
able to stop the tape at any time or at specially designed "pause
and review" points. Technical Advancements in VCRs makes it
possible for students to slow the speed of sections of the tape

when ever they want to or to freeze action as they write notes or discuss important points on the video.

Of course all the issues raised above are well known now but what seems to be of some significance is the development of 8mm video. Samples were available in high street shops in the UK as far back as April, 1985. It had been predicted that 8mm video would revolutionise the television scene and change not only the size of hardware but also the quality of video. This has not happened. Some models of Camcorders have been reduced in size to take 8mm videotape but VCRs are sticking to standard videotape; this has lead to the manufacturers of 8mm technology to accept the fact that they will not change the face of television yet. They now have video adapters for their 8mm tape to fit onto VHS "which is still reigning supreme". (Bates 1987)

8mm Video does not seem to have broken into the broadcasting industry so much at present as many companies are still trying them out, but quality seems to be improving all the time. Broadcasting houses seem to have accepted the new technology and are now willing to switch to more economic technology. With the moves towards deregulating production crews, one man crews will soon be the order of the day. In fact, William Smith (1987:1-4) reports on an important development about "one man studio" particularly for distance education institutions. He feels that what has kept video expensive is its labour intensiveness:

> ...It was also noted that very few educational video
> productions world-wide had even been able to pay for
> themselves. Because most of the cost of video production
> is largely that of labour, a special studio was developed
> which eliminated all production crew, except the presenter.
> It was an electronic wonder and it worked. In this way it

was possible to produce a complete programme using only one person and the costs dropped enormously.(Smith, 1987.2)

Smith puts his finger on the problem spot of television. Video can be distributed in narrowband and without the media unions particularly in the UK causing trouble, they can be by-passed completely for educational purposes. One snag though still persists, that in many developing countries video technology is very rare or unknown. The numbers of students who have access to these facilities is so small that at the moment hope lies in group or institutional viewing. Developing countries wishing to tape this resource may need to plan for community viewing centres which already exist in many countries. Zimbabwe may be a case in point: culture centres are being developed in all the 55 rural districts in growth points. These culture houses [a prototype has been completed and is in use at Mtoko] will have a local library, cinema and other community related projects. A video centre can be useful at each of these centres as all either have hydro or solar generated electricity. Many government departments and almost all the teachers colleges have VCRs some like Hillside Teachers college has a fully fledged Educational technology Centre with video production capacity. It could be arranged that students view videos there during their face to face sessions.A detailed analysis of video in Zimbabwe will come later on.An adaptation of the North Island Open College model [Tayless 1986:161] to include video distribution could be one way of utilising video in disadvantaged countries. Besides just freezing distance, video has been used for teaching specialist courses; consider McConkey and O'Connor,1981, who used a minicourse to

train speech therapists in a similar format to what was mentioned earlier, "narrowcasting"; they point out that:

> videotape easily integrates various teaching techniques verbal explanations, diagrams and clinical examples... Students can review the tapes as often as they wish and, of course, the same tapes can be used from year to year[ with revisions if necessary.
> [McConkey and O'Connor 1981:98]

### Videodisc.

Videodisc has benefited from Laser technology, rather than a tape, it uses the now familiar discs. It works like videotape except that a disc can store a lot more information in both text and visuals. Estimates on videodisc capacity vary from 50 000 to about 200 000 pages of information which can be accessed instantly.

Its unique features have been exploited by those in industrial training for interactive video. Smith [1986:76] reports on the use of interactive video for training General Practitioners in the diagnosis, classification and treatment of asthma at a distance. It appears as if videodisc is still too expensive and very few institutions let alone students have access to it. If it ever becomes commonly available, videodisc promises to be a very compact way of delivering instruction.

The main advantages of videodisc over videotape are that the recording medium is long lasting and of higher quality than videotape. Still pictures can be frozen indefinitely; features such as frame advance and slow motion are of much higher resolution than home VCRs. The sad news is that, to date, most videodiscs are for playback only and appear to be out of reach as

far as distance learners are concerned.

Most of the media discussed above, are still very expensive and very few students can afford them. In the meantime, greater use of these media can be made for course production and staff training purposes.

# CHAPTER 6

## NETWORKING TECHNOLOGY

Introduction.

As delivery and access systems, the new technologies covered in this chapter are also governed by the same principles as those discussed in the previous chapter. In a way, this division[1] is slightly arbitrary if not just a way of making the information manageable. But on close scrutiny, there may be subtle differences between the technologies covered so far and the ones under current discussion. One of the differences is that, even if these technologies are an extension of the former, they are mainly macro systems, displaying a large degree of elasticity.

These technologies are not only for local use but they can be used for international education and communications as well; this makes them ideal for global co-operation in distance education in addition to their normal telecommunications use, eg. telephones. Older educational technologies, such as film strips, slides, 16mm films and so on are often used for contiguous teaching.

In this section, the role of the telephone in distance education will be examined first, followed by that of the computer-based

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[1] Chapter 5 concentrated on the older media, especially text processing. In this chapter, emphasis will be on the mass use of newer technologies, satellites etc. as global carriers of the older technology.

media and satellite technology. The last part of this chapter will examine the more important issue, as far as this work is concerned: the role to be played by these technologies in the developing countries.

## Distance teaching by Telephone.

Like other technologies: radio, television and audio cassettes, the telephone is now part of many homes; its use for educational purposes has been slow to take off in many parts of the world however, except in North America where it has been in use ever since 1939. [Moore 1981:27] There the University of Winsconsin took over the work of the "Educational telephone network" set up in 1965 and it has managed to offer a number of credit and non-credit courses over the years. Even though the teaching potential of the telephone had been acknowledged for some time in those countries which had established telephone networks, it was not until the 70s that organised telephone teaching networks were tried out for University education, The telephone has its advantages and disadvantages as Short[1974] points out:

> Nobody would pretend that the telephone is as satisfactory as face-to-face in all circumstances. It is a question of weighing the pros and cons and choosing the right circumstances. [Short 1974:61]

Despite its problems, the telephone has proved to be a a useful tool in distance teaching even though it lacks some of the non-verbal cues. It is now generally accepted [Mcquail 1987] that non-verbal communication is useful in enhancing understanding of what is being said. Physical appearance, facial expression and posture are familiar types of communication: consider the impact of physical appearance on people who meet for the firt time.

Unfortunately, initial judgements about people's social class, and background may lead to wrong judgements, if other factors are not taken into account. Facial expression and posture are other familiar types of visual information. Consider the example given by Short,(1974) of the various cartoon techniques of showing a happy or sad face. Consider further, the information which can be transmitted by someone in an interview: sitting asymmetrically, one shoulder down, legs crossed sideways in a chair, which may indicate a state of relaxation. Fiddling with hands, may indicate nervousness or lack of confidence. Care should be exercised in all these assumptions because the meaning of gestures and posture is culturally relative. Take as an example the act of greeting another person: some cultures shake hands, some kiss, some hug and yet others greet from a distance as a sign of respect and so on. Visual communication therefore form an important part of human communication as it gives some form of feedback which helps the communicator to plan his utterances strategically. In interpersonal relationships, visual communication may be just as important in some cultures as verbal information. How then can it be possible to teach at tertiary level using the telephone you may ask?

When one is removed in space from the source of communication, one may have to rely on technologies. Short[1974] argues that the auditory channel is a good carrier of information and that:

> ...students learn as much or more in telephone conversations as in face-to-face conversations. We can therefore accept that in so far as the purpose of teaching is simply to convey information the telephone is at least as effective as face-to-face. [Short 1974:63]

Discussing the future of media at the Open University, Stevenson [1981] endorses the view that students can learn from any medium:

> The success or otherwise of any medium in a multi-media teaching system is dependent only upon the relevance of the material being taught and the skill of the teacher. By and large students will learn from any medium and, in fact, in most learning situations the multi-media approach is the rule. [Stevenson, 1981:19]

Since one of the main problems in distance education is access, there is evidence that use of the telephone could be one way of minimising student isolation. The question then becomes one of finding methods and subjects which lend themselves to the use of the telephone. There is a need to be clear that the unplanned use of the telephone, where tutor and learner occasionally telephone each other, though useful in distance education to give students support, is not the subject of the current discussion. Teaching by telephone is a deliberate and planned activity which needs an operational budget whether students are taught as individuals or as part of a tutorial group. Telephone teaching may be referred to as teleconferencing, which is by no means a term exclusively used in distance education as it is also used in business.

## Tutoring by telephone:

There are many factors which may lead a distance education institution to consider tutoring by telephone: for specialised subject matter, long distance, limited time, disabled students and for student counselling. In her review of telephone tutoring at the OUUK, Robinson[1981] points out that geographical remoteness is the main criterion used in three regions. Students with clear travel problems or who are disabled are identified and

a tutorial group formed,linked by phone.

Telephone tutoring involves the use of the telephone to provide student motivation, coaching and instructional support. The telephone plays a major role in providing a human element in distance education and inbreaking down the isolation of students. In Canada for example, the telephone is used extensively at Athabasca University. At Athabasca, a tutor is allocated about 30 students who can contact the tutor at specified hours during the week. Tutors are expected to contact each active student at least once every three weeks as well as mark assignments. [James 1987:42]

At the OUUK, telephone teaching is much more flexible and there are marked differences in its use even between regions. Some regions make extensive use of telephone tutoring whilst others do not use systematic telephone tutoring at all. Region [R10] Wales for example, used about 227 hours [Robinson 1981:58]; of these, 140 hours were used for study centre tutoring and about 87 for home based instruction. There is a sharp contrast between this region and Scotland [R11] where only about 60 hours were registered for the same period; Robinson says that many of these calls were home based because of the long distances between students.

Initial work before tutoring begins includes establishing contacts with the relevant telecommunications company, which then organises a conferencing bridge; a device which facilitates group conversation. In the majority of cases, the students participate

from their own homes, as in the Scottish example or at their nearest study centre. It was shown above how at the OUUK, there are wide variations in the use of telephone tutoring, (e.g. individual tutorials, counselling, specialist conferences etc.) even though the fundamental issues: careful advance planning, concentration, lesson preparation, evaluation and everything else necessary in contiguous teaching is the same.

Advantages of using telephone networks.

In addition to the positive traits about the telephone mentioned above: extending learning opportunities to people who otherwise are unable to do so for a variety of reasons, it also has its unique qualities. Moore [1981] reports that the "telephone differs from other media in being more highly interactive, and therefore permitting a lesser degree of structure by the instructor than is required in teaching by correspondence text, radio, television or computer". The telephone, for example, allows the instructor a certain amount of flexibility for last minute additions and updating his lesson. This is not always possible with other media which follow a tight script. An important characteristic of the telephone is that it makes it possible to meet the needs of highly specialised learning needs, as is the case at the University of Wisconsin. (see Biard, 1986/7). If this were contrasted with mass media, one immediately realises the limitations of broadcast media. There could for example, be only a few dentists in the whole country; instead of leaving their surgeries to attend a seminar on the latest techniques, they may join in a teleconference. The inclusion of

slow scan graphics like those in cyclops [McConnell 1982] improves the learning potential of the telephone. The telephone has a psychological characteristic of immediacy as the learners actually talk live with the instructor and their peers. The learner is free to interrupt proceedings at any time if he has relevant problems.

Disadvantages: There are however certain limitations in using the telephone as shown by James[1987]. Its effective use is constrained by the need to be too time structured, which is at variance with the distance education trait of freedom to learn when one wants to learn. Many students may not have a telephone and thus be unable to avail themselves for telephone intruction.

Organisation and training:

In order to be effective, a telephone tutoring system needs to be organised very carefully. Students must be approached not only on time but there should be adequate flexibility for those who may want to join in later because of a change in their circumstances. Short [1974] suggests four logical steps to be followed in system design, for it to work effectively, we shall summarise the steps below.

Step I

Initial research should include finding out the number of students with access to a telephone either as a group or as individuals. A check should be made with course designers, course teams if they require the service. (volunteers are usually the best to start off with). If there is adequate

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need for the service, normally the administration of the institution will then approach the Post Office or some other appropriate body for telephone bridges or links. It may be advisable to give an indication of the geographical distribution of the students. At the needs analysis stage, attention should be paid to detail and nothing should be taken for granted.

## Step II

Planning translates the needs into a practical action plan: which should take into account, length of training for staff and students, the number of telelessons per course, times for the lessons, introductory pamphlets, choosing a type of link system appropriate to needs (whether for study centre use or public telephone network ) and so on.

## Step III

Even though needs analyses have been carefully conducted and plans and timetables drawn, the programme can still fail if the actual implementation is not well designed. Teleconferencing needs good technical equipment, clear lines and the like; it is necessary to maintain good communication channels between all those concerned. students need to receive lesson guidelines in advance; they need to be assisted to settle in as well as knowing where the material they are about to learn fits into their course objectives. (see also Meakin,1978)

<u>Step IV</u>

Formative evaluation in telephone tutoring and conferencing should be an on-going exercise, but it should be deliberately built into the system. Summative evaluation is certainly necessary each year for new systems. Evaluation tools should not only be formal occasions, but illuminative too: taking advice from students, potential students, researchers and so on. Cost analysis should be an important part of course evaluation even though it is generally accepted that telephone tutoring is cheaper than other forms of instruction.[ Moore 1981; Meakin 1982; Robinson 1981]

<u>Computer based technology</u>

Computers are now widely used in distance education systems for a variety of purposes, for example in course development by staff, counselling, teaching students about computers (as content), etc. It is because of this wide-spread use of computers, that a number of terms have been used to refer to the utilisation of computers in distance education. Informatics, is one such term which is meant to indicate the inclusion of some aspects of information processing, microprocessing and teaching in educational computing. Romiszowski [1986.267] shows that there are three commonly used terms: computer-managed learning and instruction [CML and CMI], computer-assisted learning and instruction [CAL and CAI] and computer-based learning, instruction or training [CBL, CBI, CBT]

However, whichever term is used, the meaning is the same; this has resulted in the general use of CAL/CAI and CML by many

writers. If one were to take Romiszowski's previous term informatics, the division between the function of computers as the content of education and as the instrument of education is amplified :

> This distinction separates the problems of designing curricula for computer or general computer literacy, from the problems of utilising computers in the educational process. [Romiszowski 1986:267]

Computers as content and computers as instruments are now two huge areas of study in their own right; for this study though, focus will be on the utilisation of computer-based technology as delivery systems rather than as content. There is of course some controversy at the moment about whether CML is part of CAL or not. Shobe [1986:223] for example argues that a CML system includes course authoring, student assessment and feedback and student records. This view includes all the activities in CAL which are both labour-saving and facilitate learning. Kemmis et al. [1987:67] support Shobe's view that" CAL occurs within a broader milieu".

This broader milieu includes three distinct elements in the informatics as instrument perspective: computers used as tools for management [large-scale management of education/ training projects/ institutions] are CML; computers as tools for teaching [testing, drill/practice, programmed tutorials, conversational tutorials, simulation and inquiry-type of data base] is regarded as CAI; computers as tools for the learner [ Programming for specific problems, word processing , calculators etc] all form part of CAL. [Romiszowski 1986:268]

Reference has already been made to CML and CAI/CAL in chapter 5.
The FernUniversitat LOTSE programme (see Fritsh, (1982) is an
example of CML, this includes the OUUK's Computer marked
assignments [CMAs]. Video discs, interactive video, CYCLOPS etc
are examples of CAI. Programming for course PT501 [OUUK] referred
to earlier and use of other technology mixes by both the learner
and the instructor, which includes all the above mentioned
technologies, summatively form part of CAL. A few more examples
of CAL will be discussed below in order to clarify issues
further. The microcomputer seems to have the greatest potential
for use by distance education students. We shall discuss it in
much more detail.

## Microcomputers in distance education.

One of the greatest limitations of telephone teaching is that it
uses only the audio channel; recent technological developments
have led to the invention of telewriting [audio graphics] in
order to enhance telephone instruction.

> Telewriter technology typically involves the addition of a
> microcomputer with graphics capability, a graphics tablet
> and a modem that splits the telephone line into audio and
> data channels. The addition of technology to the
> teleconferencing system provides two-way transmission of
> graphics information. [James, 1987:42]

In Canada, the University of Calgary, Southern Alberta Institute
of Education and Athabasca University co-operated in acquiring
equipment, (see James 1987). This resulted in major savings and
easy access and exchange of conferencing bridges. In the UK, the
OU developed its own system of telewriting (which is now
defunct) called CYCLOPS. This system splits the two stereo sound

tracks of an audio cassette so that one track carries the sound system and the other carries visual graphics. Since the light band that carries the graphics is so narrow, only slow scan graphics are carried.[Sharples 1987:66; McConnell 1982:21] Even though this technology is promising, it is not yet widespread and is still having teething problems. As Sharples observes:

> ...tutorial sessions during the first year of trial were marred by technical and operational difficulties. Extracts from the students' feedback sheets, completed at the end of tutorial, indicate the severity of the problems and the students'inability to manage the equipment: most of the session was spent in trying to connect centres on sound and vision, when one line operated, the other did not.
> [Sharples,1987:68]

Students' experiences at the OUUK in using CYCLOPS underline the importance of the need to use simple equipment for distance learners, or else students will attempt short cuts or ignore operational instructions. Sharples reports that:

> Some students ignored the instructions for CYCLOPS completely and set up the equipment in a manner that seemed natural: one student removed the coaxial cable connecting the terminal to the TV and substituted a TV aerial cable...another, instead of following instructions to wheel the CYCLOPS trolley to the tutorial room, sat all evening in the store cupboard waiting to be connected.[ Sharples,1987:78]

Sharples highlights the most important point about technology for distance teaching, that it must be simple and easy to use. Microcomputers are very useful but they are always conceived as being difficult to use by independent learners. As they are now an important part of distance education systems, it has become even more important that everyone involved in distance learning knows something about computers. Because the computer is so versatile, it lends itself to creative use by both amateurs and

advanced computer users.

## The versatility of computers in distance education.

The discussion above has attempted to show that computers can be used in a wide variety of situations in distance education. There are very few technologies which do not use computers. In distance education, computers are useful because they can be used by the individual learner to communicate with a tutor and other students. The student can in addition use word processing software to write assignments and get instant feedback from his /her tutor. If a computer is used in conjunction with audio or visuals as in interactive video, the student can have a very personalised system of learning.

The discussion about co-operation in course production between the Universities of Strathclyde and Deakin in Australia in chapter 5, seemed to demonstrate how quickly course teams can exchange information by using the public packet network. [Castro et al 1986:93] There is already co-operation between examiners and moderators to ensure that there is uniformity of standards is already taking place in Canada and Australia. Savings in travel time by external examiners is another possibility as scripts could be sent by electronic mail to wherever the examiner may be; but of course this depends on how secure the information will be in a public access network like British Telecom "Gold". The ease and versatility of CAL makes it attractive enough for many people to want to use it in one way or the other both within institutions as well as for international use. Satellite technology makes it possible to communicate instantly across

national boundaries.

Satellite technology; dispelling myths.

International cooperation in tertiary level distance education has enabled distance educators to consider and utilise satellite technology. (see Bates 1987, for a discussion on the Universities of the West Indies and the South Pacific) There are however still many myths about satellite technology which should be dispelled if adequate policy issues are to be formulated for the use of this technology in DE. We discuss here some basic satellite issues.

A historical note: The idea of transmitting television from orbiting satellites first appeared in a science fiction magazine in an article by Arthur Clarke in 1945. [ Maybury 1987 ] Developments in satellite technology have been very rapid ever since the 60s; the American and Russian space programmes served to accelerate public interest in the peaceful use of satellites. In 1962, the first transatlantic television pictures were relayed via Telstar; these were cut off after four months due to a nuclear test accident. Telstar II was launched two months later followed by a number of satellites: Olympia 1964, [Japan] INTELSAT series, [International Satellite Organisation] ATS 1-6 series, [American voice/picture Communication system] Symphonie series [Germany and French] and Canada and the USA also co-operated in many trials.

In less developed countries progress was reported too; the Regional Latin American System for Education was initiated by a

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joint UNESCO /International Telecommunications Union study in 1969; India took the clearest steps in utilising satellite as an instrument of mass education when it took over the American ATS-6 in 1975; the well documented Satellite Instructional television Experiments [SITE] resulted from that adventure. Even Indonesia, and Arab States joined in the satellite race by 1976. It may be necessary to examine briefly some technical issues which made satellites so favourable leading to so much activity.

## Satellite basics for distance educators:

The unique feature of the communications satellite is its area of coverage capability as distinct from terrestrial point to point networks. [ Fraser 1975 ] This coverage is made possible by a combination of three vital pieces of hardware; on the ground there is "uplink" hardware which may be based in a TV studio or Earth Station; in some cases the Uplink unit may be mobile. Provided that programmes are available, [ this issue is usually the last to be considered, if previous examples are to be gone by] television signals are changed into microwave radio signals which are transmitted to the satellite via a parabolic dish antennae. Some uplinks now serve as both transmission and receive instruments.

## Sky Technology:

Sky satellite technology is a spacecraft which needs to be transported from earth to its correct position in the sky. Three stage rockets are commonly used for this purpose. NASA is a major launcher in the United States; Ariane specialises in launching satellites for Western countries and those in the Eastern bloc

use Soviet technology, which has proved to be both reliable and cheap; it costs £30m as compared to Ariane which charges about £85m. The launch costs do not include the cost of manufacturing the satellite, which costs between £100m to £400m depending on the size, as satellites come in different shapes and sizes depending on what they are used for and the area to be covered. When calculating the total cost of one satellite, one should add the cost of a back-up.satellite which is also in the sky and a spare one on the ground. Low powered satellites; those with 30 transponders [30 TV channels], cost between US$25m to US$55m. The true cost of one satellite is then multiplied by three; in the above case, the cost would be about US$165m. [Bates 1987]

High powered satellites have a larger footprint and are sometimes used to cover a whole continent, as will be the case with Olympus, a European Direct Broadcasting Satellite [DBS] which became operational in 1989. Even though this type of satellite costs much more, there are lots of savings from receiver equipment which then requires smaller antennas and covers a larger area. Using 1986 prices, Bates[1987c] says the cost of a High powered satellite may be between £170m – 350m.

The availability of satellites covering the whole globe or a large section of it, as is the case with INTELSAT IV series and Olympus [1989] make international telephone conferencing and tutoring a possibility. The fact that laser technology makes it possible for one transponder [satellite transmitter] to carry one television channel, about a thousand audio and voice channels and almost a similar number of text and data channels makes audio

communication very cheap indeed. [ Bates 1987c] An encouraging observation, is the ease of making receiver dishes in some developing countries like India and Zimbabwe. Satellite antenas are now easily manufactured in Zimbabwe.

Parking.

If the launch is successful, the (geostationary) satellite is placed at a geostationary position on the "Clarke belt" which is about 36,000 km above the equator and travelling from an east west direction at about 11,069 km per hour; this is about the normal rotational speed of the earth t the equator and therefore the satellite appears in the same position from earth. It takes a while to get the satellite parked and working because it has to be propelled to within 20 metres of its position using its own fuel hydrazine or gyroscopic devices, [electrically operated gadgets] see Maybury 1987 p.62 for details. Each satellite's position is allocated through international agreements which map out a square of about 120 km for it. Of course not all satellites are parked on the Clarke belt. (Spy satellites may rotate the earth from a few hundred miles, making it possible to complete a revolution in an hour and half. Research satellites like Voyager have an even more complex route designed to take it to pass near Mars by a certain date.) There are many satellites in space, many of which we may never hear anything about in public.

Once settled, the solar power panels are then extended; these generate operational energy for the satellite for the rest of its life, which is about seven to ten years. As back-up or during eclipses when the sun's power is not available, nickel cadmium

rechargeable batteries are used to power the satellite. Satellites need to be re-positioned at least once every two months. The technical implications of satellites should be appreciated by distance education institutions planning to include them in their development plans.

Reception equipment:

Three basic instruments are necessary to receive satellite signals directly: the now well known parabolic dish; a tuner to convert the signal to normal television use and a receiver. It was noted earlier in this chapter that the size of the dish depends on the type of satellite in use; whether it is high or low powered. In DBS, dish sizes can be as small as 1.4 metres in diameter instead of the 2 metre dish sometimes necessary for low powered satellites [Bates 1987c].

Tuning in, involves moving the dish around facing the sky until it logs in with a particular satellite, it is then firmly fixed to avoid movement by winds. If programmes from a different satellite are required, either the dish is moved around again or another dish is used. Advances in this type of technology now make it possible to have "steerable" dishes which are remotely controlled; this then makes it possible to tune in from one satellite to another without having to move the dish laboriously each time a change is required.

Cable and microwave distribution.

Of course, only a few years ago it was not envisaged that satellite transmission would be directly available to the general

public but rather through cable, microwave and terrestrial networks. Cable and microwave distribution are suitable if signals to be received are from a low powered satellite. There is need for an earth station with large antennas. After decoding the signal it is distributed from a central point to multi-point destinations by coaxial cable. This cable is physically laid underground as in Britain or hung in between overhead telephone lines as in America. Even though microwave distribution uses radio signals, it still relies on terrain and terrestrial transmitters for a point to multi-point network to work.

Cable distribution invariably causes deterioration in picture quality along long lines; Brown [1987] reported the discovery of a new Optical fibre technique which could reduce loss of picture quality in "branches". Problems faced by Aberdeen and Clyde Cable show clearly that with the advent of DBS, (Direct Broadcasting Satellites) cable television will have very limited impact on distance education systems in its present form. Direct Broadcasting is proving much cheaper than laying out an infrastructure for a cable network.

This limited impact will not only be due to the fact that there is consumer resistance, but also because one of the reasons for developing cable was to provide a variety and choice of programmes. Many cable companies offer only a limited range of channels compared with what viewers can get for themselves if they use dishes. The general availability of VCRs and cheap overnight video hire [as little as 50p] now provide a lot of alternatives; viewers can see what they specifically want to see

rather than general cable programmes provided by the children's or Music Box channels for example.

From a distance education perspective, cable TV may have a number of advantages, provided that it is accessible to students: tutor/ student conferences are easy to organise; two-way communication; little line interference and ease of centre-to-study centres communication. The main problem is that cable networks are expensive to lay out and many local authorities are hesitant to allow laying of cables in their areas due to lack of large demand for the service. The future seems to lie in DBS.

The impact of educational technology in developing countries.

The reason why technologies in education have not lived up to their expectations, is not because they are generally in-effective but that those utilising them did not follow technosystem principles. The very fact that even after two decades, educational technologists are still not completely agreed as to what educational technology is, is an indication of the complexity of the problem of identity. A large number now agree in principle that:

> A technology is a bundle of means- techniques or methods which have been designed to secure a specific set of ends-aims or objectives. So "Ed Tech" denotes the various means by which educational ends are pursued. ... A technology is therefore a collection of theoretical instruments, which is to say that each is based on a theoretical hypothesis that if you perform X, there will be result Y. Like all theories, the theories that underpin technologies are not necessarily true as a matter of logic. any theory can turn out to be wrong ... [ Hurst, 1975:163 ]

Relevance or appropriateness are now the key areas of debate; unlike a decade ago where novelty and issues other than results

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were the sole determinants for the adoption of a certain experimental media in developing countries.

## Educational technology in developing countries.

The term developing countries is synonymous with a number of other terms which are in general use: third world; less developed countries; disadvantaged countries; North /South divide and so on. In fact terms of all sorts have come and gone out of fashion. Whatever term is used, sympathetic or derogatory, the aim is usually to highlight the differences between the distribution of wealth in the world. Some have used the main ideological stances dividing the world. First world/West refers to those countries of a capitalist orientation led by America; Second world /Eastern bloc, those countries of socialist orientation led by the Soviet Union and Third world refers to the rest of the other countries.

Mountjoy [1978] uses the economic criteria of industrialised, less industrialised nations and per capita income per person. Less developed countries as he sympathetically calls them, are those that have less than US$ 500 annual income per person. Some countries in Asia, Africa and Latin America are well below this figure. A World Bank policy study on "Education in Sub-Saharan Africa" [1988] uses the terms low income countries. The underlying feature of all of these countries is that until about two to three decades ago, many of them were colonies of Western powers. Some of these countries like Zimbabwe only became independent less than a decade ago.

During the colonial period, many of these countries were used by

their masters as reservoirs of raw materials which also re-exported finished goods to the colonies. Very little was done to make the colonies technologically independent, in any case that could have been against the letter and spirit of "empire". In some cases, very selfish policies were implemented where "Natives" were systematically deprived of education, meaningful jobs and were segregated under the pretext that they were inferior to their masters. This went on for centuries as in the case of Angola and almost a century in the case of Zimbabwe. The Third World can therefore be regarded as a creation of Western countries because they standardised the colonised people to suit their style of government, business infrastructure and ideology. This is why developing countries are perceived as similar despite the differences which are known to exist among them. Cries for independence from indigenous people were ruthlessly suppressed until there appeared to be no alternative except to grant them independence. That this independence was given grudgingly, is seen in Mozambique where bridges and vital machines were destroyed by the Portuguese just before independence. It was with some delight that former masters watched some of these countries flounder and make mistakes as they sought self-reliance and identity. These countries had, of course, developed an infrastructure over decades which could not be easily changed. They had inherited" broken down cars without the means to run them". All of them had to go back to their colonisers to ask for help in one way or the other. In many cases, documents were removed from local record offices and information was only available from foreign museums and libraries instead of local

government offices.

A fact which should be stressed is that all developing countries are different even though they may display similar symptoms of poverty and a young population, limited infrastructure and so on. For example, people in Zimbabwe regard cattle as wealth and food whereas in India they are sacred and many people there will not touch cows milk. Group adult education may be a way to solve illiteracy in Zimbabwe where male and female mix freely and yet this strategy may be taboo in the Sudan and so on.

The introduction of educational technology, radio, television and now satellite, was viewed with suspicion in the developing world. Very little regard was given to national boundaries and political feelings, perhaps because it was known that these boundaries were not true demarcators anywhere, as they were drawn for the convenience of the colonial powers. An example of this disregard of national boundary was the UNESCO proposal for an African Educational Satellite in 1973. [ Cowlan 1974 ] This proposal was of course rejected by African ministers of education because it did not recognise individual requirements for each country, operative feasibility, relevance and side effects. Cowlan [1974:133] calls this the Aswan Dam effect.

An established infrastructure makes it inevitable for developing countries to rely for their technology on developed countries. Many scientists have lamented the fact that very little technological innovation is taking place in developing countries. Various experts advise these countries to specialise on what they

are best at, producing raw materials. The price for raw materials fluctuates violently due to the "world market" which is controlled by the Western countries. This has led to the destruction of the economies of many countries in the developing world, Zambia is one example. Some countries have even been prevented from growing their own food by the World Bank, but encouraged to grow instead cash crops which can be sold to service loans from the West. The Sudanese dilemma is a case in point, where it was recommended that they grow cotton in the Gezira instead of food. The World Bank argument was that food was very expensive to store in Sudan; it was cheaper to import it from the United States. What about the traditional storage facilities which are very useful in many parts of the world? India has made strides towards technological independence as their satellite experiments will reveal. But recently, due to the failure of Ariane and NASA, they turned to the Russians to launch their latest satellite; it cost them about £30m which was about £55m cheaper than Ariane, but the United States turned around, despite the failure of their own launches and stopped any one using the Russians if their satellite contained US parts. As of the moment, India cannot use the Russian system. As long as access and ownership technology is controlled entirely by developed countries, developing countries will be reminded of their past positions of dependency. This need to be politically aligned with the West in order to get western aid may frighten off some countries and many will be reluctant to utilise technology which they feel that they may never use effectively.

It is actions like the cases above which make many developing countries cautious and nervous of accepting new technology from developed countries. But again, these countries risk being punished if they resist "advice" as was the case when Zambia scrapped the foreign currency auctions in order to stabilise its currency in 1987; they lost the right to further World Bank loans with the result that Britain withheld its £30m loan to Zambia. Zimbabwe declined World Bank advice concerning the idea of reducing graduate output. The result was that it has had difficulty in raising support for a second university; America has of course used various excuses to cut aid to Zimbabwe. However well intentioned some of these actions of major Western powers, some developing countries are bound to emphasise that they are being punished for their stance on the South African issue which is perceived differently by America and Britain.

Most less developed countries have relied on western aid for their technological advances. In education, this has been confined to a supply of audio cassettes, filmstrips and 16mm films to selected schools. Audio visual centres were established in many countries during colonial times; no further development has been made in many countries as this technology was perceived as alien to local conditions. After independence, many countries learnt for the first time that there is a commodity called foreign currency; this is because currencies of mother countries were used in the colonies. Local currencies began to compete in the open market and many of them were crushed badly because of a number of factors: civil wars, price of raw materials, poor

administration and many other causes beyond the control of these countries.

One other reason for the failure of this Piagetian and Skinnerian based technology was that local teachers did not understand the need for them and very little training was provided. As a result many teachers view these technologies as a burden and not as aids to learning. Numerous examples of technologies "gathering dust" can be cited. There is obviously some advantage for change, everyone involved realises that, but the power of resistance to change is often overlooked. This resistance is due to the technological gap which exists due to lack of cumulative experience in the invention and use of technology by people in developing countries. But the fact remains that:

> ... the technology of communication [ is] basic to all other technology, for if tool technology was man,s physical powers, communication technology, as the extension of perception and knowledge, [is] the enlargement of consciousness. But the core of the present communications revolution is not a specific technology but [a] set of concepts ... [Bell 1980:507]

## Criteria for choosing technology in less developed countries.

Nyerere, says that it is to man's consciousness that technology should seek to address itself if it is to succeed not only in developing countries but anywhere. This consciousness was recognised not only by Freire, (1971); Nyerere (1964) but by even earlier scholars like Socrates and Plato. This western core of influence is acknowledged by Giddens, (1984); writing on the structure of societies he says:

> Established industrial nations of a western core, maintain a central position in the world economy on the basis of their temporal precedence of the less developed societies.

Technology more than anything else has widened the gap between the haves and the have nots;in adopting technology for distance education, indeed this applies to anything else; a few common sense strategies need to be taken into account seriously if success is to be achieved.

- relevance, the technology must serve a specific purpose;
- relative importance;
- operational feasibility;
- side effects;

We shall discuss the above issues below.

### Relevance.

For any nation to develop, it needs to be adept with advances in technology elsewhere, and to be able to choose and adapt whatever developments it chooses to incorporate into its own planning strategy. Determining the degree of relevance is not as easy as many people believe; there is internal and external relevance. These concepts may be seen as two sides of the same coin. Internal relevance of a technology is measured by its capacity to satisfy specific objectives. These objectives may be current or for the future. Take the example of a country planning to introduce television transmission for the first time. If we can ignore everything else and concern ourselves with only the question of whether it should be colour [which is expensive] or black and white [which is cheaper]; internal considerations would be what sets are easily available, what television will be used for, by whom, area to be covered initially and so on. Black and white television may at first glance be the obvious choice. But

external relevance may show that suppliers no longer manufacture black and white transmitters; the few left have no spare parts back-up. In this case external relevance becomes very important if the TV transmitters are to work for more than just a few years. If receivers are completely unavailable locally, then it may be unwise to consider the idea of TV altogether. The point is that technology must have a specific purpose within the country and there must be a need for it. In distance education systems, it is vital that any technology adopted should be easily available to distance learners or it must be relatively important to warrant study centre provision.

## Relative importance.

The relative importance of any innovation is even more difficult to determine because it depends on the knowledge one has about a whole array of other factors. In economics this is called opportunity cost. Any country needs to feel secure, so security would be an important factor among others: food for its citizens, health, economy, education and so on. In developing countries, priorities are in health, food and education. If, for example, the development of a distance education system is contemplated, the methods to be used must be weighed against the needs for food and health. An important question would be to ask who will benefit and what will they contribute to themselves and the economy at large. Whatever choice is made, it must reflect the relevance and importance of the innovation to that particular society. The technology must have the capacity to be transferred. If it cannot be transferred to suit local requirements, then it

is irrelevant and should not be considered.

## Operational feasibility.

The question of operational feasibility can best be said by asking a number of questions to ascertain that the technology will work and produce the desired results. How much does it cost? Can it be afforded? What will be the running costs? Who will operate it? Can some of the work be contracted within the country? Is it better to buy it outright or to rent it? Are there any spare parts? Who else in similar circumstances is using the technology? What have been their problems in using the technology? and so on. All these questions are of course tied in with relevance and importance, but they need to be addressed very carefully indeed. It is also necessary to decide whether you need a pilot project or not. This will depend on the scale and nature of the project.

The University of London, for example, did not pilot its cable network project between Westminster and Charing Cross teaching hospitals because they found enough evidence that the project would serve their purposes effectively through rigorous proactive research, ( see Williams 1985). Proactive research is also useful as it may reveal potential side effects of the innovation or technology.

## Side effects of introducing a technology

The introduction of technologies in developing countries has its hazards. The technology may mean a change in the way people live and do their work. Cowlan 1974 referred to above gives an

interesting example of the Aswan Dam effect. The Aswan Dam was built high on the Nile to generate electricity and to provide regular water for irrigation. The consequences have been the replacement of periodic flooding which has deprived the country of its natural fertilisation; salination of the soil; decrease in sardine fish which depend on silt from the Nile for their food; increase in snail borne diseases as they depend on a steady stream of irrigation water and so on.

The introduction of any technology inevitably has side effects; it is vital that these side effects are known so that they are minimised or controlled wherever possible. Extending education through distance education may lead to:

- a house bound population, with the consequent decline of leisure activities;

- heavily structured lives as people schedule their lives to fit in with learning all the time;

- diminished self-concept as everyone may believe that they do not know as much as they should;

- family problems;

- increased financial strain on individuals;

- manual work being looked down upon;

The concept of second chance aspirations may become a second failure when many adults discover that they really cannot succeed in the courses they choose. The technologies discussed in chapters five and six need to be integrated into an overall scheme if they are to succeed. Of course people like Schramm realised this more than a decade ago, he said then:

> The most important need for developing countries is to conceptualise their educational problems and then to choose

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the most cost effective system – which may include various
media to solve these problems. No single medium can solve
all problems, and variation in learning is more dependent on
how a medium is used rather than which one is used ... While
a number of developing countries have invested heavily in a
big medium – television – there is evidence to suggest that
use of little media, especially radio has not been
adequately explored. [Schramm 1977]

The task of this project is to identify means and methods of
distance education at University level from a Zimbabwean
perspective. As previous chapters bear witness that distance
teaching is heavily dependent on communications and educational
technology, it is now necessary to examine distance education
systems in order to identify the role played by technology. All
along, references were made to specific technological uses; the
next chapter will examine the use of technologies within the six
distance teaching subsystems: philosophy and system design;
administration; student support, selection of media, course
production and evaluation. These subsystems tie in with the
issues discussed in the previous chapters: concept of distance
education; the process of adult learning; motivation and
education and communications technologies in distance teaching.

Conclusion.

As distance educators are increasingly being asked or encouraged
to cooperate internationally using advanced technology, it is
absolutely vital that they understand not only the technological
hardware but also its cultural implications.

CHAPTER 7


UNIVERSITY DISTANCE TEACHING SYSTEMS: SELECTED CASE STUDIES.


> The problem of how to combine media in the art of teaching
> has...been with us for a very long time. The difference
> today is that media are so much more readily available than
> they previously were for instructional use,and many of them
> are expensive and elaborate tools over which the classroom
> teacher has less control than over a slate or chalkboard or
> a picture clipped from a magazine. [Schramm, 1977 p.14]



This chapter will briefly analyse a selection[1] of University

distance teaching models in order to highlight some critical

issues in DE, which will include:

- needs analysis;
- planning;
- organisation;
- use of media;
- problems encountered; etc.

In order to simplify matters, we will use the three broad

subsystems where appropriate: course development subsystem;

student support subsystem and the administrative subsystem. As we

have seen in chapter 1, there is now a wealth of literature on

distance teaching universities[2]. In the literature[3], there is a

consensus of opinion that there are five common organisational

models.

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[1] Whereas in 1965, Peters found out that there was only distance
    education in South Africa [UNISA] and nowhere else, Graff and
    Holmberg 1988 managed to raise over 1,600 institutions of
    various kinds.
[2] see Holmberg, 1985.
[3] see especially, Kaye and Rumble,(1981);Rumble and Harry,(1982);
    Kaye,(1988); Perry, (1984) and Daniel et al, (1982)

Villarroel, (1988 p.55-56) summarises these five organisational models in the following form:

Model [1] independent universities specialising in distance teaching;

Model [2] study units operating within traditional universities;

Model [3] service institutes which provide distance education on behalf of traditional universities;

Model [4] distance studies organised on a co-operative basis by several different institutions;

Model [5] public or private institutions whose distance education services are 'sidelines' or small scale.

The above models are an extension of Kaye and Rumble's (1981) analysis. Many distance teaching institutions and their organisational structures conform to one of these models. All these models display, in varying degrees the six subsystems discussed in chapter four. From a media perspective, Bates, (1980/2)* has extended the models listed above to seven, only because he includes media based formal systems and non-formal broadcast programmes at secondary and adult-based elementary levels, which are outside the scope of this project. As far as possible, cases will be selected from developing countries which share similar socio-economic problems with Zimbabwe.

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* In 1980, Bates was commissioned by the International Institute of Educational Planning in Paris to carry out a survey of the use of media in 12 distance education systems around the world. After data was collected, nine respondent institutions attended a workshop in Paris. A report of both the findings and the workshop were published in 1980. A summary of the findings was also published in ICDE conference papers in 1982.

CASE STUDIES:

Model [1] : Independent distance teaching universities.

The first independent distance teaching university was the
University of South Africa, back in 1947[5]. Since the opening of
the OUUK, in 1971, many such institutions have been established
all over the world. Daniel, (1988) has given a global tour of
distance education systems, his main concern was the absence of
such institutions in Africa. Harry and Rumble ,(1982) analysed
nine "Open Universities"; Bates (1980), had no difficult in
finding 12 Open Universities for his study; Perry, (1984);
Coffey, et al (1988); Graff and Holmberg, (1988) have likewise
conducted international surveys specifically designed to find out
the extent of the use of distance education methods.[6] In
addition, there is now a steady stream of literature reporting on
new and old projects.[7]

The main distinguishing feature of these "Open Universities", is
that they are designed to teach mainly distance education
students. These institutions range in size from about 2,000
students, at UNED (Rumble, 1982), to 700,000 at the Chinese TV
University. (Jianshu, 1988). Many of them benefit from economies
of scale and use a variety of media, as Wagner, 1972/77 and
Laidlaw and Layard , 1974 have reported.

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[5]  see Daniel, 1988 p. 25
[6]  Perry,1984,found more than 135 distance teaching institutions
at tertiary level(out of 333 responses) and Graff and Holmberg,
1988, received more than 197 replies to their questionnaire.
Coffey et al, received about 320 responses out of 400
questionnaires.
[7]  see Sewart and Daniel, (1988) and Daniel et al,(1982)

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Peters,(1983) has shown that the organisation of these institutions is most industrialised and sophisticated. Many of them have been created to relieve pressure for more places in traditional universities. Often, they run a network of regional and local centres. Course production and counselling services are also in some cases highly industrialised. (Fritsch, 1982 p.140). The Universitas Terbuka in Indonesia will be discussed below in order to highlight these issues. Later, UNISA will also be briefly examined, since it plays an important part in tertiary level distance education in Zimbabwe.

Universitas Terbuka (Indonesia):

Brief country Profile: Indonesia is a classic "Third world" country. It inherited the most backward education system in South-East Asia from the Netherlands colonial government, Setijadi, (1988 p.189). In the 1940s, it had only a handful of primary schools and colleges of its own, relying instead for all its manpower needs on the Netherlands. Like most developing countries, Indonesians had to fight for five years before they received their independence in the early sixties.

The country is vast and made up of islands scattered over a large area, and now has a population of more than 169 million. Even though the population growth has slowed down slightly, it is still very high, about 2% per annum. There is very high unemployment and under-employment of about 42%. There are also very high levels of illiteracy and the economy is basically agricultural. Since the oil revenue slump in the 80s, the country has had to cut its budget in its (1986/9 development plan.

Education: During the Second World War, Indonesia did not even have a budget for primary education,(Setijadi, 1988). Building of these schools was the responsibility of the people. At independence, demand for primary and secondary schools increased dramatically, for example in 1974 alone, 52,000 primary school teachers were appointed to new schools. People themselves built these schools and when they were complete, were handed over to the government. These efforts were boosted by a presidential directive which made huge funds available for primary and secondary schools.

Primary and secondary school expansion was not extended to tertiary education, as resources could not cope. Setijadi, shows that by 1986, there were 486,000 applicants for 82,000 places in government colleges. The number of graduates from secondary schools in the same year was over 900,000.

As the economy has a low absorption rate[e], many of these school leavers are unemployed. Private higher education institutions charge very high fees, and yet the government higher education institutions can only absorb about a third of the school leavers. Realising the potentially explosive situation, the government decided to establish Universitas Terbuka (UT) in order to increase access to higher education.

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[e] It is not just the unavailability of jobs causing low labour-absorption rates, but also,the low calibre of school leavers. Those who can get employment of any kind, are unwilling to leave it in order to receive further training. Distance education seems a natural choice to many 18-25 year olds.

## Universitas Terbuka: Objectives.

The most important objectives of UT are stated as :

[a]   to provide better access to higher education for recent
      graduates of senior high schools.

[b]   to provide urgently needed graduates,which could not be
      met by regular institutions.

[c]   to increase the participation rate of 18-25year age
      group from 5% to 8.5% between 1986 and 1989.

[d]   to increase general participation of the population in
      tertiary education, without requiring them to leave
      employment and with limited academic staff.

[e]   to train increasing numbers of students in areas
      demanded by the economic and cultural development of
      the country.

[f]   to up-grade secondary-school teachers who had earlier
      been trained on short programmes, to enable them to
      obtain the full teacher-training degree.[9]

                                              (Setijadi,1988).


## The instructional system:

The final decision to go ahead with the UT project was given in

1983. A planning committee was formed and given nine months to

produce plans.[10] It is not surprising that the planning

committee:

    " decided to build the simplest system of distance
    education possible, which could be developed by using
    available means". (Setijadi,1988 p.190)

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[9]  In the 70s, a short term secondary teacher training programme
     was introduced with the view of up-dating this at a later
     stage. In 1981, a distance education project for secondary
     school teachers was established,which later became part of UT.

[10] Compare this planning period with that of the OUUK, which
     took two years,Perry, 1976 and UNED, 1 year, Rumble, 1982.
     Other universities took even longer, see Odumbe,1988 p. 343.

The system was not open to everyone, as minimum qualifications were laid down and a target population was carefully chosen. As such, it was possible to offer the same standard curriculum for anyone who joined the university and enrolled in the same programme.

Use of existing communications infrastructure: a deliberate decision was taken to use the post office as a delivery point for course materials. Students had to go to their nearest post office to register and pay their fees, as well as receive study materials. At a later date, the students were required to confirm their registration at a regional centre. They then received further information about tutorials, exams and general counselling. It was planned right from the beginning to use existing Government higher education institutions as regional centres. This proved valuable as the first batch of applicants when the university opened in September, 1984, threatened to be overwhelming. There were 270,000 applications. The plan had been to accept only 25,000 students during the first year, the number was immediately increased to 65,000 with 60,000 being finally registered.

Use of media and technology: course subsystem

High technology was not left out on the grounds that the country was underdeveloped. The committee looked at long term, rather than short-term problems only. A combination of available media and resources were used, for example, instead of using big mainline computers, UT rented computer time from the University

of Indonesia, even for registering its own students. Word processors (Apple MacIntosh II+) are used in order to speed up course production. Individual professors and course teams were engaged to write courses depending on what was regarded as appropriate. The planning committee worked out that it takes six to nine months to complete writing a course. The main medium of instruction is print, but many courses also use audio cassettes and radio for publicity. Where appropriate, the telex, microcomputers and point-to point telephones, public libraries and magazines are used. In some cases, the requirements of UT students have led to the improvement of their home area communications. In these areas, old systems have proved inadequate and new ones were installed quickly after pressure from students. Special rates for students using point-to-point telephones for tutorials have also been introduced. Another interesting feature is the responsibility students have for their tutors. In many cases, student groups hire their own local tutors. Setijadi claims that this ensures that tutors are of a high standard.

Open circuit broadcasting: Both radio and television are used in varying degrees, depending on need and the availability of resources. Materials are broadcast from government and private radio stations and from the only government TV station. Radio time is available at any time when the university needs it , but television is provided only twice a month for twenty-five minutes per programme. The university has to pay for TV time, beyond the 'free' twenty-five minutes . Limited resources have

caused UT not to utilise fully additional morning TV slots now on offer.

Even though research is part and parcel of the development of the university, there are no reports yet (in professional journals) giving details of how students evaluate the broadcasts and other media. Also vital is information on student drop-outs and how media is helping minimise the impact of social isolation. Comparative costs of such media and audience reports may be also very illuminating when they become available.

Student support: There are thirty two regional centres scattered all over the country, but their role is not very clear at the moment. Initially, they were involved in the registering of students and the povision of various tyes of support. In 1986, it was discovered that students from remote areas had problems travelling to regional centres, so registration has been centralised again to make it easy for isolated students. Registration can now be conducted by mail without the need for students to travel.

Problems and challenges:

UT has only been operational for about four years, and as such it would be extravagant to make over-optimistic claims, but current developments in this "Third World" country are extremely encouraging. A very important point about current success is that UT has got the support of every one in the country. There is a high degree of co-operation at every level. This made decentralisation possible in September, 1987. Study materials can

now be purchased from commercial bookshops as well as other public places.

Previously, students had to wait for almost two months after initial registration to receive materials, and valuable time was lost. UT now runs an open enrolment system and three examinations are conducted every year. The bottleneck between secondary education is however still there. Many students have not been able to get a place in the new university. Little information is available about the actual courses on offer, but there are indications that the range of options will have to be increased in the near future.


## Model 2: dual mode (study units within traditional universities)

The pressure for more places and the desire by conventional institutions to serve new clients, has led to the establishment of distance education study units within many conventional universities. One of the most popular mode in Africa, is the method used by the University of New England in Australia. The distinctive feature about this mode, is that full-time lecturers are responsible for both internal and external students[11]. All students write the same examinations and these are marked by the same lecturers. The philosophy behind this strategy, has been the quest for 'parity' and desire to maintain similar standards. It has also been claimed, (Smith, 1987) that in this model, study materials can be updated regularly.

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[11] Sheath, (Holmberg,1985) popularised the formula that one full-time lecturer could also be in charge of 50 external students.

For a number of reasons, the "New England" model has been equated with the "Australian model". It is however now widely known that there are other models of distance education in Australia, which are becoming more and more influential, notably, the ones pioneered by Deakin University, University of Queensland and Massey University in New Zealand. The strategy at these universities is different because, first, at Deakin, DE is regarded as the main activity, Northcott, (1984) and at the Universities of Queensland and Massey, a separate unit looks after DE students.

Some developing countries have imported the "New England" model, one of the earliest countries to do so was Zambia.

## University of Zambia: problems of the External Studies Unit.(DCS)

The case of the University of Zambia External Studies Unit (DCS) is well documented[12], in fact it is one of the best known in Africa. As such , we shall only briefly look at its history, concentrating instead on the problems which have been faced and the lessons these have for other developing countries.

## Country profile in brief.

Zambia is a large country of about 753,000 km$^2$ in Southern Africa. Population estimates vary from six to seven million. It gained independence in 1964. Many Zambian writers, Siaciwena, (1983), Nyirenda and Kakanda, (1982) and Sinyangwe, (1976) point

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[12]   see,   Sinyangwe,   1976;   Siaciwena,   (1982a/b,   1983,   1985,
       1988a/b);   Nyirenda   (1989);   Nyirenda   and   Kakanda,   1982;
       Coombe, (1988); etc.

to the fact that at independence Zambia was way behind other British colonies both educationally and technologically. They also highlight the fact that at independence, Zambia had about 1,200 people with two years of secondary education, and only 100 with university degrees, which included only two with degrees in agriculture, one in engineering and five with medical qualifications.( Nyirenda and Kakanda, 1982 p. 22).

The decline in world trade on raw materials in 1974, heralded by the hike in oil prices. Coombe, (1988 p. 9) observes that world economic developments structurally damaged Zambia's external terms of trade. "If Zambia cannot break out of economic crisis, the [reformed] educational structures cannot be sustained".

The country is still dependent on copper exports, which are not doing very well in world trade. The value of the kwacha still continues to plummet. With the removal of food subsidies, as advocated by the World Bank, in 1986, prices have risen sharply leading to political instability. One of the objectives of the external studies unit was to open access to higher education in order to enhance political stability. What went wrong?

<u>External studies unit at UNZA: a shrinking well:</u>

Pressing manpower shortages, rapid development of primary schools, a 'large' young population, lack of material resources all characterised Zambia's period of post independence. This situation is in fact not unique to Zambia, as the Indonesian case above revealed. All the above traits are common to all developing countries, differing only by degree. In 1967, through the

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adoption of the Lockwood commissions recommendations, the University of Zambia (UNZA), established an external studies unit modelled on the New England design. (Siaciwena, 1988).

The objectives of the unit as stated, were:

[1]     to supply high level manpower to all sectors of the economy;

[2]     to cater for adults who were born 'too early' to benefit from higher education, to give them a second chance;

[3]     to up-grade secondary school teachers;

[4]     to relieve pressure on university accommodation, by allowing students to study through distance education.
                                            (Siachiwena, 1988)

These aims are exactly the same as those stated by UT above, and seem to be high sounding, but very little seems to have been achieved in the past twenty one years.

Student subsystem:

The External Studies Unit started in 1967, with 157 students. The figure has gradually increased to 792 in the 1987/88 academic year. There has been a constant concern with internal structural problems, so much that there is little or no published research on student characteristics, use of non print media, study time available and so on.

Kakanda& Nyirenda, (1982 p. 23) tell us that the majority of the students are adults employed in various sections of the economy including the army. The age of the students ranges from 29-49 years. Most of the students are said to be males living in the major towns, "because of improved postal services", in urban

centres. Siachiwena, (1983) however points out that full-time students who cannot continue with their studies can enrol for the external degree. The stringent requirement that students attend residential school for a fortnight per term in order not to be withdrawn from the course, seems to be geared towards young students studying full-time through distance education. The suspension of external studies in the 1981/82 academic year led to third and fourth year level courses being available for full-time students only. This made it impossible for a distance education student to complete a degree without spending at least two years on full-time study. This seems strange, because one would expect that senior students in their third and fourth year would be most capable of independent study. The system seems to be self-defeating.

Some of the students live in rural areas, far from roads and post offices, as Siaciwena points out[13]. Available literature seems to take for granted any problems students might have. There is an obsession with parity of academic standards at the expense of anything else. Student support is non existent except through written assignments whose return rate is suspected to be far from adequate. (Nyirenda, 1989 p. 152)

Courses subsystem:

In 1967, it was possible for a student to study for any of the six degrees on offer including the B.Sc. But by 1988 only two degrees, arts and education and a diploma in education remain on

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13 see also Kakanda and Nyirenda,1982.

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offer to external students. (Siaciwena, 1988 p. 200).Courses on offer through distance education have shrunk from 60 to only 28. The main reason for this trend seems to be that departments have claimed that their courses, including law, cannot be taught at a distance. Individual lecturers are responsible for writing their own courses on an annual basis, which leads to materials reaching students sometimes six months after registration. (Siaciwena, 1988 p. 201). Poor cyclostyled copies seem to be what is commonly available.

## Media and Technology

The department is so short of resources, it is even difficult just to find transport to send a typewriter for repairs. There is no other technology other than the basics. Radio is also used for very short periods, (15 minutes) per week for general adult education, produced by the department of Mass Communication. (Nyirenda and Kakanda, 1982).

## The problem.

Trevor Coombe's' (1988) observation that Zambia's educational reform problems are deep rooted, are true, but in the case of the External Studies Unit, the major problem seems in part to be organisational.

Organisation of the Department of Correspondence studies, from 1967 to 1975 was straightforward; it was a department with 'full' autonomy. Its director reported directly to the Vice-Chancellor. It was allocated its own funds but it has never had its own accommodation. It is currently housed some ten miles from the

office of its current director, who from 1975 has also been the director of the Continuing Education Centre (CEC).

The CEC comprises three departments, DCS, Department of Mass Communication and Continuing Education. Decisions about DCS are now taken at CEC level and have to go through a cumbersome process before the Vice-Chancellor can react to problems[14]. In chapter 4, it was emphasised that the highest authority in the institution needs to have a direct link with the activities of distance teaching in relation to its publics.

## Control and pressing issues:

Most of the problems of the Department of Correspondence studies seem to emanate from lack of control over important activities vital to the success of a distance education system. Professional distance education staff at the DCS are marginalised and the following other factors, have been observed or implied.

1. The department has no budget of its own, it relies on the tiny allocation given to CCE.

2. The department has no control over course production. It can offer advice, which is increasingly being ignored due to the administrative structure[15].

3. Staff have a negative view of distance education. The department has had eight heads from 1975, there is no continuity, which is vital in DE. Training is urgently required at all levels.

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[14] see Siaciwena, 1988a/b for a fuller discussion.

[15] Members of other departments find it easier to reach decisions about DE from their departments straight to senate, than through the complicated route through DCS!

4. Despite the fact that the department is one of the oldest at UNZA, it has not got accommodation of its own. This does not improve the status of DE.

5. Annual production of cyclostyled lecture notes should give way to properly produced study units; the OUUK uses a five year cycle or more for its courses. Staff should be paid extra for their efforts, to boost morale. There is little evidence of use of existing communications technology.

6. The New England model has outlived its function in Zambia. It seems as if the target population is not being reached, and original objectives are not being realised. The numbers of students which have been served are too small for a twenty-one year practice. The model has to be revised in favour of the model which will be discussed below. The slate should be wiped clean and a new start made. The New England model was suitable when there were limited graduates to offer student support in regions; now expertise to run the system effectively appears to be available in Zambia. What is required is to give DCS staff more control over the activities of the distance education unit. Alternatively, the Centre for Continuing Education should be drastically reorganised, so that the departments it comprises are more complementary than competitive.The system is not offering economies of scale and neither is it helping to solve the pressing manpower and economic needs of the country in any significant way. Evidence from experts on the ground[16] leads the writer to suggest that this model is inadequate.

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[16] Juma Nyirenda is the director of the Centre for Continuing Education and Richard Siaciwena is the head of the Department of Correspondence Studies at the University of Zambia.

## Model 3: dual mode ( service institutes for universities)

The main difference between model 2 and 3 is that of power and control. The Zambian case shows the stark conflict between the lecturer-in-charge of both the internal and external student and the external studies unit, which is seen just as a clerical department "helping" with administrative duties. In the "Service Institute" model, the unit, is independent and in charge of DE. Full-time lecturers may be used as requested. The unit is almost self-sufficient even with subject specialists of its own, who act as editors. Sometimes these institutions may be completely independent of the University as is the case with The Open Learning Institute and North Island College of British Columbia in Canada. ( Mugridge and Kaufman, 1986). The more successful dual mode institutions use this model. The Universities of Queensland and Deakin, (Northcott, 1988) are the most famous Australian models. At the University of Utah (Hess,1987)[17] and Wisconsin (Baird, 1986/87)[18] in the United States, these extension units even run their own satellite and telephone networks.The Extra-mural Unit at Massey University, (Prebble, 1988)[19].

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[17] Steve Hess is director of the Media Services Department in the Extension department at the University of Utah. In January 1987, they were working on proposals for a micro wave link between study centres.

[18] Marcia Baird, is director of the Instructional Communications Systems at the University of Wisconsin-Extension. In 1986/87, Educational Telephone Network linked 183 site, offered 374 programs totalling 1,974.5 hours to distance learners registered at the university.

[19] Tom Prebble is director or Extramural studies at Massey University. In 1988, Massey had 15,000 DE students, studying 450 courses which contribute to 14 degrees.

serves several universities in New Zealand. We shall however use the Correspondence and Open Studies Unit case at the University of Lagos. Even though it is now known as the "Correspondence and Open Studies Institute" (COSIT), it is still commonly referred to as COSU.

## University of Lagos Correspondence and Open Studies Unit (COSIT).

## Brief country profile.

Nigeria became independent from Britain with the majority of other former colonies in the early 1960s. It is a large West African country of about 923,770 km². With a diverse population[20] of about 101,992,000 people, it is claimed that one in every six Africans is a Nigerian. It is the second most populated country in the British Commonwealth. The country is a Federation of about nineteen states, and suffered civil strife in the late sixties when Biafra attempted to become an independent state.

Like all developing countries, the country is heavily dependent on raw materials. Nigeria is the seventh largest oil producer in the world. In addition, it exports timber, rubber, cocoa and other products.

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[20]    Nigeria's population is made up of hundreds of tribes the
       largest are the Yoruba and the Ibo.

    The population is: 48% Muslim
                       34% Christian
                       18% traditional

For some time, during the oil boom of the 60s, Nigeria was prosperous, but recently the Naira has dramatically fallen in value. Coupled with political instability, the economy is in very poor shape, typical developing country symptoms are beginning to show starkly.

As a large country, it has more than ten universities. In 1988, there were more than 101,443 full-time students. (Commonwealth Universities Year Book, 1988)*. Many students are unable to find places and existing manpower needs upgrading and retraining. Despite the fact that the idea of a Nigerian Open University was rejected by the Federal parliament in 1981, current efforts to establish one, are at an advanced stage, perhaps because of the success of COSU or increasing internal and external pressure.

COSU: Aims and Objectives:

Increasing pressure for part-time courses at the university of Lagos forced the University to seek the assistance of UNESCO to draw plans for a distance education unit within the university. COSU was nominally established in the 1973/74 academic year. It was not until 1976, that it was formally launched. COSU attempts to fulfil both implicit and explicit objectives, which are summarised below. COSU, (1978 p.3-4).

Objectives:

1. Implicit objectives: COSU has the duty :

       [a]   to bring University education to suitable learners at home, who have missed the opportunity or somehow are now unable to avail themselves of full-time studies.

[b] to enable distance learners to continue to use their expertise to contribute to the satisfaction of manpower needs of this country during the period of learning.

[c] to bring non-formal education to selected communities all over the country.

2. Explicit objectives: COSU has the duty:

[a] to organise the selection of suitable distance learners.

[b] to co-operate with other faculties of the university of Lagos and other universities in planning and developing the academic programmes of distance learners.

[c] to develop and apply teaching strategies suitable to bring university education in an effective manner, to distance learners.

[d] to produce suitable distance teaching media and make them available to distance learners.

[e] to maintain administrative, academic and technical expertise at a level sufficiently efficient for the achievement of all objectives.

Needs analysis:

Needs analysis was conducted at local and national level. It revealed that, in 1973, there were 8,000 non-graduates holding graduate teaching posts in secondary schools. A further 1,500 non-graduate teachers were holding graduate post in teachers colleges. It was also projected that a further 4,500 teachers would be required by 1980, and yet all the teachers colleges in Nigeria held a total of about 2,000 students or about 500 to 600 graduated, a year. Projection analysis, showed that there would be a shortfall of about 17,550 teachers by 1980.

Another pressing need was analysed as being for business studies: business accounting, banking, insurance and actuarial science. It

was realised that there was a serious bottleneck of trained manpower in business and law. The range of courses was limited to education and business initially. It is significant that a new degree in education was designed for the purpose.

PLANNING AND IMPLEMENTATION: (The Distance Education System)

Administrative structure:[21]

The unit was planned right from the beginning to have high grade staff at all levels. The structure shown in the COSU, (1978) report p.5 speaks for itself.

Fig. 7.1 COSU administrative structure.



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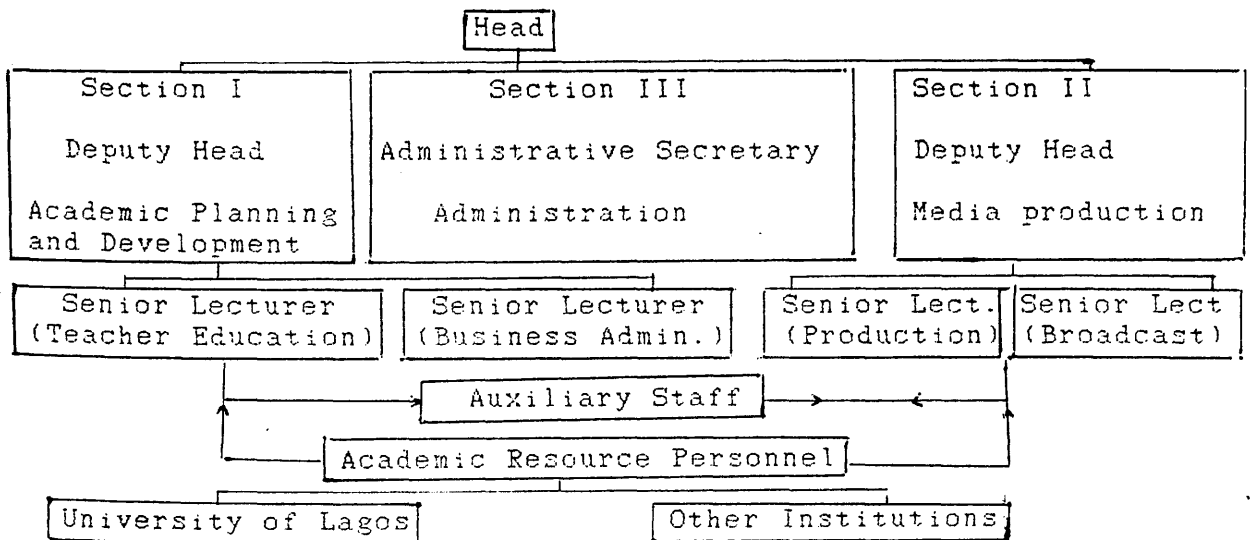
[21] Clear job specifications for each post are detailed on pages 6 and 19. Heads of departments are at Senior Lecturer level. It is the unit which is in-charge of its own business including all payments to consulting departmental staff.

Payments for production of study materials and marking assignments are standardised to minimise confusion. This arrangement attracted a lot of voluntary staff from departments, but the unit later insisted on formal arrangements as the workload increased.

Compare this arrangement with the 'near' chaos at the University of Zambia. We shall not go into details of the allocation of duties as these are very clear in the COSU document.

Operational strategy.

At the micro level, there are three subsystems: Academic planning and development; Media Production Services and Administration. At the macro level, there are fifteen local study centres across the country.

## Academic Planning and Development:

This subsystem is responsible for the selection of course text writers, editing and moderating of all text materials in co-operation with the respective faculties. The activities of the editing function can be summarised as follows:

1. to check academic content for consistency with the syllabus.
2. to check academic content for general correctness of concepts, principles, descriptions, directions, learning experiences and outcomes.
3. to check all references to textbooks, journals for correctness.
4. ensures the validity of diagrams, figures and other illustrations including labelling.
5. to check all numerical data and examples for correctness of steps and results.
6. to critically examine the method and sequence of presentation and amplifies/reorganises materials as appropriate.
7. to ensure adequacy and suitability of self-assessment questions and written assignments.
8. to agree with authors on the final changes in the texts.
9. to test and revise the texts in due course.

[COSU, 1978 p.14]

Additional duties of staff in this subsystem include: supervision and co-ordination of practical Science projects and study centre network. They prepare schedules for delivery of materials, kits and face-to-face sessions as well as write basic broadcast scripts for each course.

The chief snag in this subsystem has been the volume of work. It is felt to the writer that the responsibility for broadcast

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scripts should have been left in the broadcasting unit. Initially only two staff members were allocated, they just could not cope. The number was later increased, and other departments seconded staff to COSU. The need for training in educational technology for all staff was also realised early and training is now an on-going exercise. It was soon realised that there was need to develop subject specialists in each course, as is the case at The FernUniversitat, in West Germany, Kuffner, (1985). The pressure of work has made it impossible for the unit to conduct empirical evaluation and research, but the need appears to be recognised.

The costs for running study centres and laboratory experiments proved to be much more than had been estimated. It is at the costing and estimation stage that a clear theoretical base is vital if major mistakes and frustrations are to be avoided.

Face-to-face Sessions:

Face-to-face sessions are regarded as an integral part of the learning system. Two such contacts occur annually: the first is of one week's duration and is regarded as induction. The second is a three week vacation session. At the induction course, students are introduced to their courses and to methods of study. During the long vacation course, students have the opportunity to meet other students, conduct science experiments in conventional laboratories and so on. In addition to that, week-end seminars are held in clearly established zones. Local study centres are also always available to students, even though there is no evidence of the frequency of their use.

Student numbers seem to have been forecast accurately, as numbers have risen from 122 in 1975 to 4,027 in 1988. This figure is about 500 students more than in the actual plan, which is encouraging. (COSU, 1978) Commonwealth Universities Year Book, 1988).

## Media Production Services:

The media and communications subsystem is responsible for the design, proofreading, printing and production of all course-text materials. It also co-ordinates with the Nigerian Broadcasting Network, and distributes audio cassettes as required.

The sub-unit started off with a single page printing machine, but now has a fully fledged press due to increased needs. The main problem was the lack of qualified staff and expensive equipment.

## Open circuit broadcasting:

The Nigerian Broadcasting Services allocated television air time to the system but it has proved, as Bates, (1980) discovered, to be too expensive. As a result, only the time between 10.15 - 10.30 p.m. during the week has been utilised. Audio cassettes are used more than radio since they are cheap. Again training of staff in script writing and editing techniques seem vital. But the value of media as an integral part of the distance learning system is clearly recognised.

## Administration sub-system:

The administration unit conducts the usual university business: admission, records, accounts and general administration. COSU

admits its own students outside the University of Lagos central admissions office. This is important and gives the system coherence, autonomy and the ability to adapt( Rothe, 1986 p. 5) which is vital to any distance teaching system.

Functions peculiar to a distance education system carried out by the administration subsystem at COSU, include, the keeping of:

* records of all study centres.
* lists of contract Tutors per subject per centre.
* records of students attendance at study centres
* lists of all materials sent to each student
* records of assignments sent to and from the study centres.
COSU (1978 p. 18)

The administration subsystem also manages and arranges courier services to study centres and many other normal functions. The key point which is distinct from the Zambian model, is that nothing is left to chance. Everything is planned right down to the last detail. Even the accounting department which comes under the bursar's office is semi-autonomous.

COSU has encountered many problems, mainly related to staff training, lack of financial and material resources especially after the value of the Naira[22] fell drastically in 1986. Problems of accommodation were not easy to overcome, but in the final analysis, the system is serving its purpose. COSU's achievements were rewarded in 1987, when its Vice-Chancellor, Akim Adesola was nominated and participated in the new Open Learning venture by

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[22] In 1976, the Naira was N1 = £1; the current situation is that £1 = N10.5.

the Commonwealth[23] (Briggs, 1987). That recognition has led to the opening up and development of the Nigerian Open University.

The instability in Nigerian universities, and the constant closures have been a cause of major frustration for students. This is bound to make distance education more popular in the eyes of both the students and the authorities.

The COSU model seems to best suit those countries where credibility of degrees is a problem. The same institution accredits both the internal and the external student. It is also useful where there are shortages of qualified staff in the community to give support to the students. In countries where there are many qualified people in all walks of life, it seems possible as in the case of COSU, to decentralise student support.

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[23] The Commonwealth Secretariat commissioned a group of nine eminent scholars to study the feasibility of a "Commonwealth Co-operation into Open learning Network". Plans are now advanced and key staff to be based in Vancouver Canada have been appointed. A discussion will follow below.

MODEL [4]: CONSORTIA/DISTANCE LEARNING NETWORKS.

As distance education has become increasingly popular, institutions are beginning to specialise, which in turn has led to the growth of Distance/Open Learning Networks. Collaboration can be between two or more institutions within the same country or international. There are many examples of cooperation, which can take three forms , (Konrad and Small, 1986 p.111). Some institutions have informal arrangements. Ad hoc arrangements are sometimes used to overcome special problems, whilist formal collaboration may lead to a new organisation being formed.

Konrad and Small, perceive four kinds of distance education co-operatives:

* homogeneous institutions serving a specific purpose.
* heterogeneous institutions serving a specific purpose.
* homogeneous institutions serving a general purpose.
* heterogeneous institutions serving a general purpose.
(ibid, p. 112)[24]

The key point raised by Konrad and Small, is that membership of these cooperatives should be voluntary. They also make the point that the more members there are, there is a risk of diluting the specific objectives of each member. They further suggest that the best model for many institutions of varying levels, is the heterogeneous general purpose one. This arrangement leaves each institution with some degree of autonomy and only co-operating in the fields it really wants to be involved in. Commitment to the system is required, usually in writing.

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[24]  see Konrad and Small, (1986 p. 111-119) for details of the best purpose served by each designand examples. It is important to note that the best results are achieved by collaborating homogeneous institutions.

The brief theoretical framework given above is meant to help us to be able to discuss the Commonwealth Co-operation in Open Learning case, (CCOL). We shall also very briefly discuss the Open College (UK) and the SADCC distance education project, SADE. It may be necessary to point out that it is still too early to study this enterprise as an operational case, because it is still at the planning stage. The plans are however currently at a very advanced stage of implementation, which makes it an interesting case for speculation. This case is included here because of the possible impact on Zimbabwean higher education plans and the Commonwealth in general.

## COMMONWEALTH CO-OPERATION IN OPEN LEARNING.

The sharp increase in UK foreign student fees since 1980, has led Commonwealth leaders to probe alternative methods to keep the:

    [a] movement of teachers

    [b] movement of students

    [c] movement of ideas

Commonwealth Secretariat, (1987 p.34.)

Commonwealth Ministers of Education had on three previous meetings sought a solution, in vain, as fees kept rising. Student figures began to fall sharply towards 1985, and the Committee of student mobility began to look for alternatives to keep the free flow of students, teachers and ideas[25] among Commonwealth

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[25] Distance education was discussed in Colombo, (1980); Nicosia, (1984) and a special meeting was convened in Sofia, (1985). See Commonwealth Secretariat report on the Tenth Conference of Commonwealth Ministers of Education held in Nairobi, from the 20-24 July,1987.

countries. The issue was regarded as serious, as the whole concept of the Commonwealth is by now almost symbolic except in educational ventures, at university level. The idea of a Commonwealth Distance Education University was hotly debated at all levels. Finally in 1986, a Commission under the chairmanship of Lord Briggs was set up to investigate the idea and report to the Secretary General of the Commonwealth.

Aims and Objectives:

The message of the Briggs Report is a bold one. It proposes:

> ... the creation of a new institution to promote collaboration in distance education throughout the Commonwealth. Its object would be :
>
> . to widen access to education;
> . to share resources
> . to raise educational quality
> . to support the mobility of ideas, teaching, research and people.
>
> Our long-term aim is that any learner, anywhere in the Commonwealth, shall be able to study any distance-teaching programme available from any bona fide college or university in the Commonwealth. The new institution would seek to achieve this by working in a co-operative partnership with existing colleges, universities and other institutions of post-secondary education.
> Briggs, (1987 p.60).

A major factor influencing their decision, was the availability of global communications technology. This is made clear at the very beginning of their report:

> Communications technology makes possible an expansion of educational opportunities by overcoming barriers of distance and remoteness. It enables learners, no matter how remote, to tap the full richness of Commonwealth educational resources. The recent advances in technology, including satellites and computers ... forms the background to recent developments in distance education on both a national and an international scale.      Briggs, (1987 p.1).

<u>Needs Analysis:</u>

Through the regular meetings of Commonwealth Leaders and their Ministers of education, higher education needs of the group were generally known. Nothing was left to chance however, and as extensive research and consultations were conducted by the Commission.[26] It was discovered that there were serious regional differences in the provision of distance education. The developed members of the Commonwealth were already using DE extensively, and yet in Africa very little is being done. Much DE effort is being left to private enterprise in these less developed countries. Need areas were identified as:

[a] Manpower training in technical, professional and science fields.
[b] Medical and health training.
[c] Agriculture
[d] Computer and business education.

It was further discovered that there was considerable duplication in the arts. Some regions, for example in the Southern African Development Co-ordination Conference, (SADCC)[27] observed that the greatest need was in middle level vocational training in all sectors.

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[26] Both the International Extension College and the British Council of Educational Technology were contracted to produce more than sixteen background papers. see Jenkins, 1988.
A separate study on communications technology, was Commissioned and conducted by Bates, 1987a,b&c.

[27] The Southern African Development Co-ordination Conference, (SADCC) comprises nine countries of central and southern Africa.They include, Angola, Botswana,Lesoto, Malawi, Mozambique, Swaziland, Tanzania, Zambia and Zimbabwe. Angola and Mozambique do not belong to the Commonwealth. Each country has a special responsibility; eg Zimbabwe=food. There have been problems as to where the Regional Centre should be which have yet to be resolved.

Plans for implementation.

Given the heterogeneous nature of the situation at both macro and micro level, the new"Commonwealth Co-operation in Open Learning" organisation has to be of the "heterogeneous institutions general purpose model" mentioned above. The structure is not yet clear at the moment but advertisements for senior staff in the middle of 1988 may provide clues. The advert for the President of the organisation, stated that:

Commonwealth Heads of Government intend to create an institution for Commonwealth co-operation in distance education. .. The objective ... is to promote human resource development through sharing of commonwealth distance education experience and resources. The agency will have functions in the exchange of information about distance education, in staff training and institutional development, and in sharing of distance education materials.

The President will be the executive head of the Agency, which will have the status of an international organisation and its headquarters in Vancouver,Canada. Reporting to a board of governors drawn from Commonwealth countries, the President will develop and oversee co-operative projects involving educational institutions in a network throughout the Commonwealth and will secure support from governments ..

The Times Higher Education Supplement, (THES) (24/06/88)

Another indication of what the administrative structure would look like, appeared on the 15th of July, 1988 in the same paper where advertisements calling for applicants for "Senior professional and administrative posts" were inserted. These posts were to be at the level of University departmental head. Among other duties, these professionals would also be involved in the:

... promotion of training, application of communications technology in countries whose circumstances vary, consultancy services in developing distance education systems and institutions. THES (15/07/88 p. 31)

Earlier, in March, 1988, (THES, 4.3.88) a working group had met to try and thrash out details of the organisation. It turned out that £15m had been raised, which was half of the required amount. Only six countries had pledged financial commitment, while others including Australia and Britain were pledging material assistance to their own selected sector. Among the smaller countries, Botswana and Zimbabwe pledged to contribute money. Others, eg. Malta offered resources for a regional centre and so on. It appears as if those countries which will make substantial contributions, will have influence on the direction to be taken by the new institution. The problems to be overcome are immense leading John Daniel[20] , who was chairing the working group to admit that:

> It is a delicate political task satisfying the varying aspirations for the new institution on a limited budget. The heads of government were like blindfolded people feeling the elephant: they all saw different bits of it. THES,(4.3.88)

At their March, 1988 meeting, in Zimbabwe, members of the African Association of Distance Education voiced their reservations with the "Commonwealth of Learning" endeavour, and were marked by their absence at the ICDE conference held in Olso,in August, 1988. (Ndlovu,1988 p.13).

These few observations, cannot give a complete picture, as the President when appointed will have a significant say on how the institution will be run, but we can at least hazard a guess as to possible problems and structure from the intentions laid down for the institutions.

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[20] John Daniel is president of Laurentian University in Canada and is a past president of the International Council of Distance education.

Fig. 7..2          HEADQUARTERS STRUCTURE[29]

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                    ┌──────────────────┐
                    │ Board of Directors│
                    └──────────────────┘
                             │
                    ┌──────────────────┐
                    │    President     │
                    └──────────────────┘
                             │
┌──────────────────┐         │
│ Head Public/     │◄────────┤
│ International Relations     │
└──────────────────┘         │
  ┌──────────┬──────────────┬────────────┬──────────┐
┌─────────┐ ┌──────────┐ ┌──────────────┐ ┌─────────┐
│ Head    │ │ Head     │ │ Head         │ │ Head    │
│ Academic│ │ Media and Comm-│ Administration│ Regional│
│ Services│ │ unications│ │ and Finance  │ │ Centres │
└─────────┘ └──────────┘ └──────────────┘ └─────────┘
┌─────────┐ ┌──────────┐                  ┌──────────────┐
│ Subject │ │ Materials│                  │ International │
│Specialists│Development│                  │ Distribution │
└─────────┘ └──────────┘                  └──────────────┘
    ┌──────────────────┐                  ┌──────────────┐
    │ Commonwealth     │                  │Regional Centres│
    │ Secretariat      │                  └──────────────┘
    └──────────────────┘
  ┌──────────────────────┐              ┌──────────────┐
  │ Heads of Governments/│◄- - - - - - -►│ Institutions │
  │ Ministers of Education│              └──────────────┘
  └──────────────────────┘
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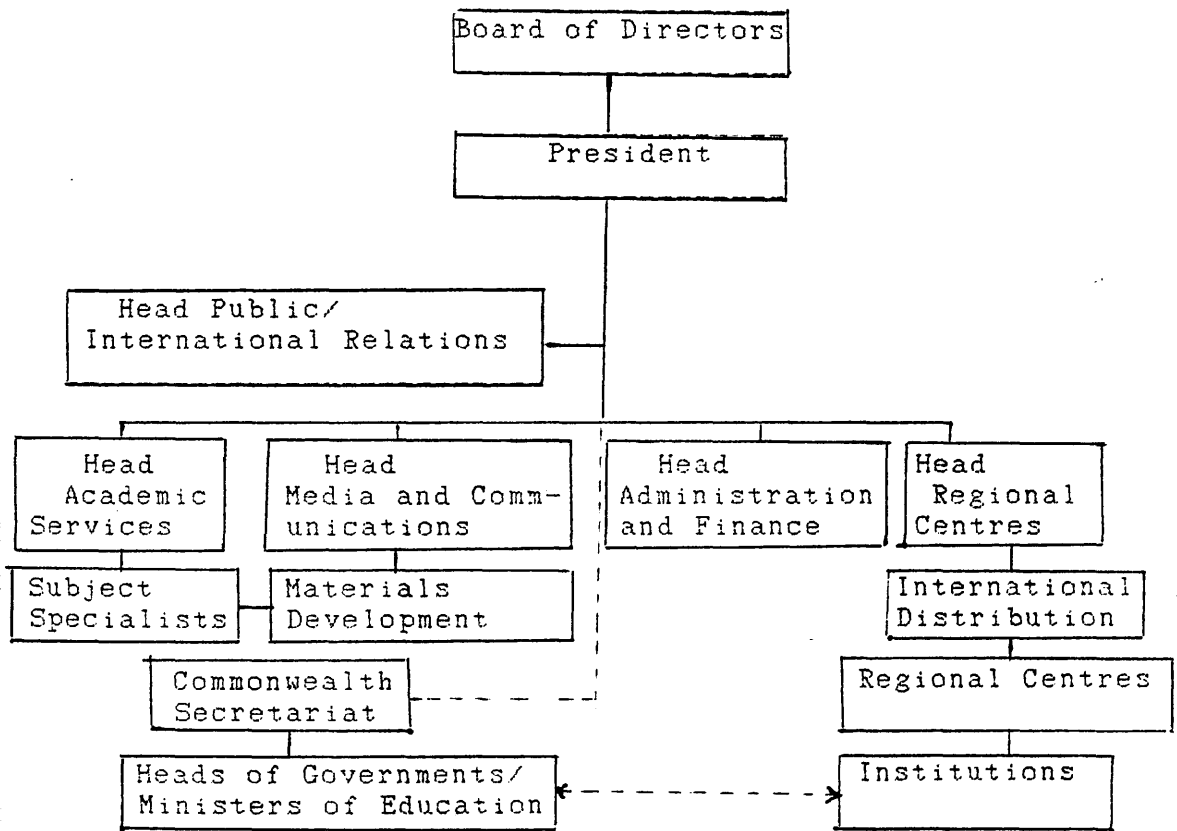
The  function  of  the departments will be consistent  with  the

systems approach  discussed in Chapter four.  It is however vital

that  in such a delicate organisation,  public relations is given

absolute  priority .  Also important is the fact that CCOL,  will

not  have direct contact,  at least at the moment with  students.

What  will  it look like at the  micro level?  We  shall  attempt

another  artist's  impression based on Freedman's (1982  p.  165)

ideas.

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[29]  An  artist's  impression of the perceived  structure  of  the
Commonwealth  Co-operation  into Open Learning.  Conceived  from
ideas  by  Konrad  and Small,  (1986 pp.  111-128) and  Kaye  and
Rumble, 1982.

Students        Student

Institutions       Institutions

Gateway Centres      Gateway Centres

Regional Centres      Regional Centres

Commonwealth of Learning

Regional Centres      Regional Centres

Gateway Centres      Gateway Centres

Institutions      Institutions

Students      Students
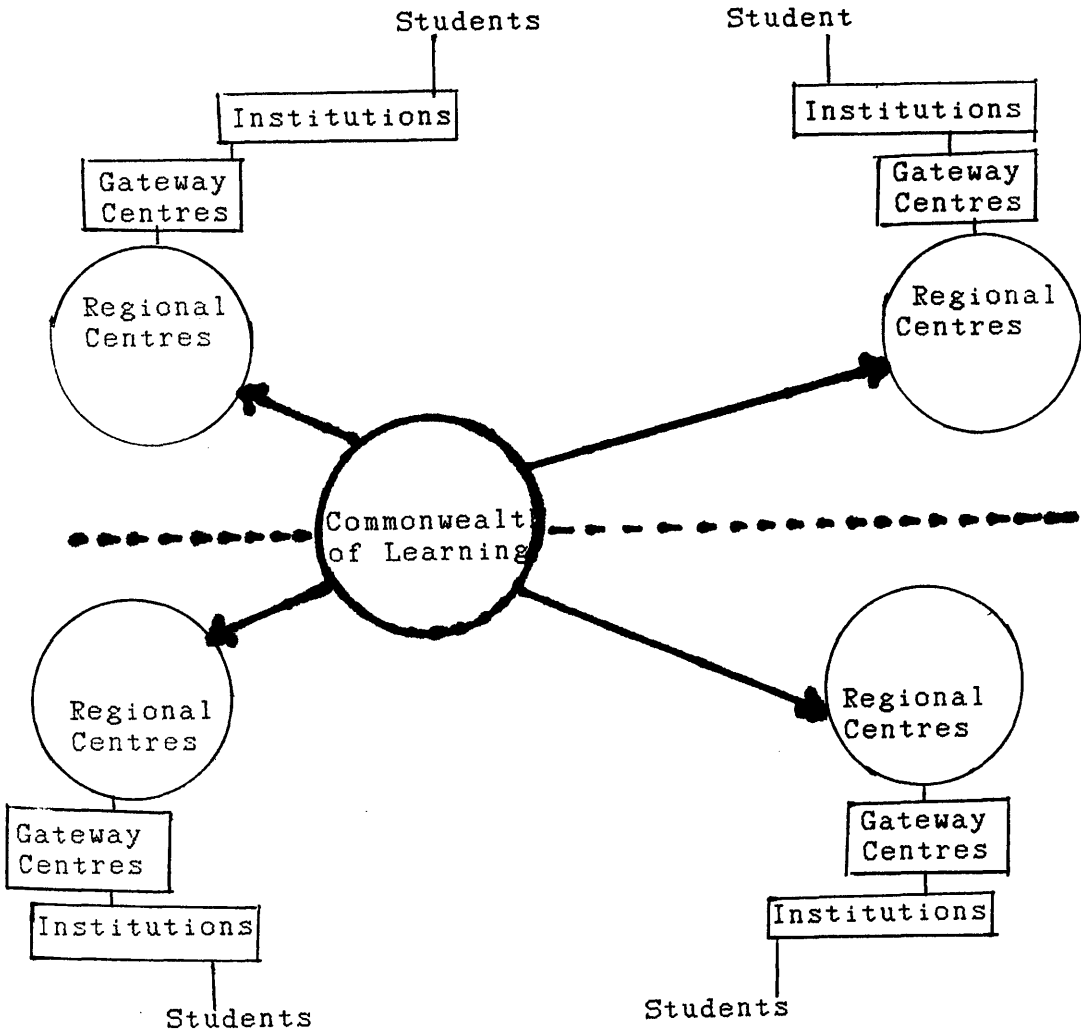
Figure 7.3   Artist impression of what the structure may look like.[30]

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[30] adapted from Richard Freedman,s (1982 p.166) flexistudy model. It is envisaged in this model, that each member country should have one gateway centre, to deal with the regional centre in order to avoid confusion. Each country will therefore be responsible for organising its own distance education institutions. Details on the likely impact of this model on Zimbabwe and other small countries, will be discussed in chapter 10.

It is beyond the scope of this project to go into detail about how CCOL may work but it is vital to be aware of the potential danger areas as these may retard development of the institutions. Problems encountered by the Open College project in the United Kingdom, ( Richards, 1988) which has a similar model at national level will be briefly examined.

Open College (UK):

The Open College (UK) was established on the 21st of September, 1987, in order to:

> improve the UK,s economic performance, using open learning to widen access to training in a range of skills necessary for the changing world of work. The college provides courses that range from basic education to degree level and additionally some post-degree professional updating. All are aimed at helping students to improve their vocational competence. Courses are available through a combination of broadcasting on radio, television, workbooks, videos, audio cassettes, computer software where appropriate and kits. local support is provided by colleges, employers and other learning establishments in both the public and private sector. Innes, (1988 p.234).

An operational network was established, with a National Distance learning Centre in London serving as the headquarters. Eight regional centres were strategically set up in all parts of the UK. Additionally, hundreds of access and "gateway" centres were encouraged to join.

Media

Television played a key role in both publicising the college and as a learning resource. Other media and aids were used as appropriate, including a mobile bus which was well publicised during the live broadcasts to students and trainers on Monday and Friday afternoons respectively, ( during 1987-88).

The programmes were of one hour duration from Monday to Friday between 1.00 - 2.00 p.m. Subjects covered varied from courses for women to electronics for technicians. But problems crept in within the first year of launch, so much so that there was talk of a collapse. (Richards, Nov. 1987) The main problems were:

- Over estimating possible number of students .

- Clashes with local colleges over charges and payments for student support.

- Under estimating initial budget. (£15m foundation grant from the government ran out before the end of the first year instead of after year three.

- Arguments with some institutions which were already using the name "Open College" and the pricing of some materials. (Public relations)

- Most students who were attracted, were unemployed, but the college was looking for those who could pay.

The above problems may seem relatively minor, but they are certainly critical to the survival of the institution. It appears as if by the end of 1988, some of these problems had been solved, but a major shift in direction had to be made. The Open College started to recruit institutional members instead of individual students. (THES, 9.9.88 p.3). A further grant of £18m has been requested at the time of writing and the National Distance Learning Centre, is being wound down to reflect the shift in emphasis.

The Open College (UK) is used just as an example to highlight the delicate problems CCOL could face if careful analysis of problems is not undertaken. We will look further at these problems, later, in the meantime, it is vital to recognise that the development of CCOL will have a definite impact on the Commonwealth developing

countries. But this model takes for granted the existence of qualified local practitioners and a sophisticated national network .

## The Southern Africa Distance Education Project:(SADE)

The Southern Africa Distance Education Project, (SADE) was a very comprehensive research project which attempted to increase tertiary level distance education within the SADCC region. (Jevons, Northcott and Polhemus, 1986/7; Sibanda and Northcott, 1989). Jevons et al; recommend the formation of the Institute of Distance Education in Southern Africa, (IDESA).

Some of the main objectives of IDESA are:
- to increase the availability of tertiary education in the SADCC region;
- to assist in the training of key technical staff;
- to reduce dependence on South Africa in DE; (see fig.7.4)
- to serve as a catalyst in learning materials development;
- to co-ordinate manpower development projects within SADCC through the Regional Training Council based in Swaziland; (see Chizinga, 1987 p. 187-226)

Unlike the CCOL project, which now has funds and a skeleton staff in Canada, IDESA, is still at the proposal stage. Jevons et al, formulated eleven operational models of which three were selected by representatives from all SADCC countries for further consideration. It is vital to note that even if all countries wanted to cooperate in materials development, they wanted to take . control and support for their own students through their own

traditional universities.  The networking models favoured were as follows:

1.  IDESA would serve as a central support agency. There would be many distance education providers (nine).  These existing institutions would share  the costs and expertise in learning materials development and distribution.  They would also continue to  engage in face-to-face instruction.  The main function  of  IDESA would be to act as an adjudicator and  to facilitate effective communication.  IDESA would have a small staff  of administrators and subject specialists based at its headquarters.

2.  In mode two, the various existing institutions would contract the  production of learning materials to professionals. Universities  in  each country would then be responsible  for the distribution and student support function.  The role  of IDESA would be mainly one of facilitator as in 1.

3.  In mode three, IDESA takes a more central role than that of a facilitator.  It is responsible for and issues contracts for all materials production, but leaves the distribution and  student  support  function  to  existing  traditional universities  in each country.  IDESA could also occasionally take direct control of distributing materials,  not to individual students but to institutions.

At the time of writing,  it was not clear whether these proposals were going to be carried out or not,  as funding depends on SADCC finding a willing donor, at least for the initial period.  But if

the idea were to come to fruition, there seems to be a possibility for collaboration with CCOL. IDESA would then serve as a main contact point for Southern Africa. An interesting prospect for an effective consortium seems attainable, with positive consequences for the University of Zimbabwe.

## MODEL [5]: DISTANCE EDUCATION AS A "SIDELINE" OR SMALLSCALE ACTIVITY .

"Small scale" distance education is developing fast and is very valuable in increasing places and reaching out to new clients in many university departments. The cause has been both the sharp drop in postgraduate full-time students and the desire for upgrading courses by managers and other personnel in industry.

This model is only capable of handling very small students numbers, because it is usually run by individual departments who set their own standards. But occasionally a collection of departments end up with more than a thousand students, between them; this is the case at the University of Zimbabwe. The impact of the courses from a technological perspective is the issue of investigation in this project. The results will be discussed in chapter ten, only then can we decide whether the model is useful for large scale distance education or not.

Where distance education is regarded as a sideline, students seem to get very little support or study materials, it is literally a matter of "survival of the fittest". Instruction is through regular and short face-to-face encounters and written assignments. It is through the work of Villaroel, (1988), that

this model has been recognised to exist in the professional literature. Otherwise it is usually associated with part-time evening courses. This is actually not the case as many students may live hundreds of miles from the instructing institutions and the only contact they have with it, being during "Vacation School" or Summer School.

Many traditional universities in both the developed and developing countries seem to be moving in this direction. Some examples are the Universities of Botswana, Zimbabwe, Swaziland, Stirling, Strathclyde, to name but a few. The numbers of students involved is very small to be of any significance, smaller than in the Australian dual mode systems, which according to Perry, 1984, can have up to 3,000 students. Deakin University is the exception because its model is more dedicated towards distance teaching, Northcott, (1984).

A sobering experience.

A review of distance teaching institutions as conducted above, leads one to the sobering conclusion that the key medium in distance education at higher level is print. Any other medium can additionally be used if it is <u>available to the learners</u>. The second most important medium for distance education instruction everywhere seems to be audio cassettes. The telephone is quickly becoming very useful to distance education as it is becoming much more widely available and cheap. But as Bates, (1982 p. 9) observes:

> [a] there is a clear movement away from using broadcasting by distance learning systems.

[b]    the range of audio-visual media suitable for distance
       education is rapidly increasing.

[c]    the educational potential of audio-visual media still
       tends to be under-exploited by distance learning
       systems.

The message from all this then, may be simply that, institutions should plan carefully to use existing communications infrastructure which is easily available to learners. Anything which can be done to minimise social isolation of distance students and improve learning effectiveness, should and can be done. (Mike Pentz, BBC 2, 1988). Open circuit television and radio appear to be effective for publicity and occasional use, but a DE system cannot be built entirely around these media. When video becomes more readily available to learners, perhaps television will have more impact as the learners may control the time when they want to learn.

Each situation or country will find certain models of distance education more suitable than others, depending on their objectives, but before a choice of a model is made, existing infrastructure is the key determinant of success unless adequate funds are available. As Coffey et al. (1988, p. 5) observe:

    Open learning is best understood as an attitude rather than
    a system; the intention is to make education and training
    available to learners in forms, at times and in places such
    that they can take advantage of it. The task of the open
    learning developer is to identify the barriers which stand
    in the way of potential students and to work to remove them.

The models discussed above are by no means the only ones, as there are many varieties of distance education, particularly in the Eastern bloc countries, which are not widely known. The

French model,(Lecourt,1988) where distance education is centralised from primary to university, is unique to their type of education system. The case studies dicussed above were selected mainly for their relevence to the Zimbabwean problem. They also served to illustrate successful strategies and the less successful ones. Distance education like anything else is sensitive to political and socio-economic factors. "It cannot survive outside the normal lives of the people". As such, we shall now proceed to re-examine DE infrastructure, practice and potential in Zimbabwe.

CHAPTER 8

DISTANCE EDUCATION EXPERIENCE AND COMMUNICATIONS IN ZIMBABWE

## Introduction.

The earliest form of distance education in Zimbabwe, as in many other countries, was by correspondence. Even though learning by correspondence has been very popular among Zimbabweans,(Lee 1987 p. 1), it is still largely print based. There are, however, a number of innovative developments within Zimbabwe which, while not fitting exactly with the precise definitions of distance education raised in chapter 4, have served a vital role in opening access to education to thousands of people, who would not have it in any other way. Important developments include the Zimbabwe National Teacher Education Course (ZINTEC), the church initiated Study Group concept, the Open School, the Zimbabwe Science project, (ZIMSCI), Distance education in full-time Teachers' Colleges and University of Zimbabwe part-time courses.

This chapter will examine the development and trends in distance education within Zimbabwe. It will look at a number of issues including an historical overview, youth unemployment and the role of an open learning; an examination of existing infrastructure, research, current practice and trends. The final section will be a discussion on the problems encountered in distance education so far. The success of any distance education programme depends on the availability of existing infrastructure. An attempt to examine current practice must also take communications infrastructure into acount.

## Historical overview.

Chapter three attempted to show the gaps in educational provision in Zimbabwe caused by the colonial and current socio-political structure. Educational provision was marked by a series of critical wastage points. Prior to 1970 for example, many primary schools in rural areas went up to fifth grade only, (Standard III). A number of these children found that they could not find places to do grade six. Even fewer proceeded to secondary schools. The now famous "pyramid filtering" design best illustrates the extent of wastage in African education. Dorsey, (1975 p.51), shows that in 1971 there were 127,790 Grade 1 pupils compared with only 49,054 in grade 7. 10,350 were able to find places in Form I and only 3,203 found their way into Form III. Out of all these, only 183 students were in Form 6, The Zimbabwe Government Paper, (1982 p.18) endorses Dorsey's figures. Even after the introduction of vocational secondary education, (F2), Dock, (1980 p.3) reveals that the situation had not changed at all. Dock, traces the first year primary school intake of 1965 (100%) to 1977. In 1971, 38% (80,812) of the total intake were able to reach the top of primary grade (standard 6). Those able to enter secondary education accounted for 7.8% F2 and 6.8% F1. The figures reaching Grade 11 (top level on the F2 stream) were 1.0% or 2,080. Those reaching 'O'level were 5,426 or 2,6% and only 0.3% were in 6th form. Wakatama (1983 p.23), designed a similar pyramid for 1958. Further and higher education figures discussed in chapter 2 reflect a progressively declining pattern. Yet education was vital for anyone who wanted a decent job, and

there were very few jobs for blacks, so correspondence education was the last resort. It is, however, important to note that Zimbabweans have in the main studied to qualify for external examinations. Wakatama, p.130, summarizes the dates and courses in Central Africa since 1954. For example, the first National Standard six examinations in Practical English and Bookkeeping began in April, 1954. UNISA introduced its Junior Certificate ( University of South Africa Junior Certificate, UJC ) examinations in August of the same year. As pressure for external degrees and university education mounted on UNISA, UJC was discontinued. It will of course be observed that these developments were designed to enhance the Federation of Rhodesia and Nyasaland and to prove that something was being done to improve the education of Africans. Zimbabweans, however, continued to take a series of South African examinations. The National Junior and Senior Certificates replaced UJC, until the London University General Certificate of Education, Ordinary level was introduced in April,1959. "A" level examinations followed in 1963. It should be noted too that schools serving whites had "O", "A" and "M" level courses right from when they were first opened and that many African external students still take foreign examinations run by commercial correspondence schools. 1988, will see the first internal GCE examinations in Zimbabwe.

## Non-formal education.

There is a long tradition of out of school education in Zimbabwe due to various historical and socio-economic reasons discussed in chapters two to four. From the fifties, almost all primary

schools in urban areas offered evening classes to workers, in all levels of primary education particularly in literacy and numeracy. Non-governmental organisations, community action groups, study groups and local councils still continue to cater for those who find themselves unable to attend formal school for one reason or the other.

Many of these organisations came together in the early sixties and formed the Adult Literacy Organisation of Zimbabwe (ALOZ). ALOZ with its associates has fought hard for the illiterate adults and unemployed young people, and has managed over the years to reduce illiteracy. UNESCO now rates literacy in Zimbabwe to be about 70%, (World Bank,1988 p.30). ALOZ has developed with the Zimbabwean society as it now concentrates its efforts on literacy related projects in order to consolidate literacy, for example ALOZ News shows that:

> By the end of December 1987, ALOZ's project team was assisting 55 different project groups. Project types involved include: small scale piggeries, bakeries, poultry,market gardening, uniforms production, general dealer shop, and a cement sisal roofing sheets production... Training focused mainly on skill, leadership and self-management.      ALOZ News (December 1987 p.2)

ALOZ Project advisers, travel over the country and can therefore meet only a small proportion of learners. Distance and open learning strategies could ensure independent learning even though the project organisers are on their own. Over fifty savings clubs have been formed in order that the participants can save money together and learn basic maths.

## School-leavers:
It is ironical that the very success in Zimbabwe's education

system has created a problem of unemployed youth. Some of these young people leave school due to financial and social problems, but they want to continue with their education. Still more find that they have completed four or six years of secondary education and do not have all the grades they need to be able to train for a profession. Almost all training in Zimbabwe now requires "O' levels. It is estimated that in 1986 about 96,671 students took Cambridge School Certificate examinations and less than ten percent passed in five subjects or more. Many of the young people find themselves unemployed or join study groups in order to supplement the subjects required for studying a professional course. The government acknowledges that the problem is more pressing than that, because many of these young people actually passed in both O and A level. Zimbabwe does not provide social security for young people nor the unemployed This effectively means that most of these eighteen or twenty one year old adults, who are entitled to a vote in society are dependent on their parents or relatives.

This dependency at a crucial time of adulthood has been proved to diminish self-concept and to create a learned dependency culture. Coleman and Baum (1985) describe the plight of many of these youngsters.

> On the family level, one of the first effects to be noted is the prolongation of 'youth' through being out of work, the prolongation of dependence. The effect is that, despite having gone through the process proper to the period of adolescence, the young person does not achieve the autonomy. Being out of work strangles this plan of birth, keeps them in a state of dependence, prevents them from taking their place in the world which evaluates people by what they do. ... Some of the effects on personality can be seen in loss

of self confidence and self-appreciation in a generalised
sense of frustration... in the long run, [this] damages
their personality and makes it difficult for them to take up
work.                    (Coleman and Baum, 1985 p.58 )

In Zimbabwe and many other countries where youngsters are
perceived by their parents as children until they move out of
home after marriage, the prolongation of youth is even more
marked. To keep themselves occupied, youngsters join study groups
run by commercial and church organisations. Public libraries also
are playing an increasingly important role for those who want to
study independently.

Some writers emphasize the youth issue because they feel that
unemployment is always distressing, and that youth unemployment
is especially damaging because adolescence is the stage at which
individuals must establish identities. Roberts, (1980 p.71).
argues that:

> young people are stripped of childhood statuses and the
> security they offered. Adolescents are expected to grow up,
> leave school and become independent of their families. They
> need to redefine their relationship with their parents.

Physical maturity adds to these problems as it makes it possible
for many of these young people to have established relationships
at school. As such their motivation may be geared towards family
life which is never realised due to lack of further education
chances and unemployment. This state of affairs has forced many
girls in Zimbabwe to turn to older men for temporary
relationships because they have more resources, or to drugs and
prostitution. Unexpected pregnancies are common because society
frowns upon unmarried girls using contraceptives. Newspaper

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reports, (Sunday News, 1988) have supported the view that school girls should be barred from family planning clinics. The result has been widespread 'baby dumping'. Young men also suffer from the plight of unemployment, drugs and criminal activities.

Young people all over the world seem to be going through a difficult period, as Coleman and Baum again emphasise the generality of the problem world-wide:

> Many young people shut the door to the future, seeking release from their frustrations in drink and drugs. Others try to survive through recourse to prostitution or deliquency, with the consequent alienation from society that these activities suppose. So being out of work has a doubly destructive effect on young people, since it corrupts not only by stimulating them to crime, escapism and prostitution, but also since it destroys their creative capabilities - by depriving them of the identity which enables them to place themselves in relation to the future. Coleman and Baum, (1985 p. 61).

The point is that many of these youngsters' cognitive creativity ceases to aspire and just exists due to the mismatch of school-acquired knowledge and social conditions immediately after leaving school. The situation is so grave everywhere that it has led to 'moral panic' on the part of many governments all over the world. It may be useful to look briefly at a few examples.

Handling the youth dilemma: a wider experience.

In the United Kingdom, the post war baby boom led to critical youth unemployment from the late sixties. A number of projects have been tried to provide young people with something to do. In 1972, the government sought the cooporation of industry and all interested non-governmental organisations to provide short term training in order to circumvent the "lack' of experience charge

from employers.This was known as the Community Industries project. Many school-leavers were trained for a job for up to nine months. Whereupon they were then released to re-enter the job market. The scheme was of limited success as Trade Unions charged that it was a way of getting cheap labour. Roberts, 1980 p.64 supports this view and says:

> Firms recruiting school-leavers to unskilled jobs are seeking cheap often temporary labour. The employers realise that they are offering neither the wages, conditions nor prospects to attract anyone they would wish to engage permanently.

School-leavers, of course, were aware of that, so the scheme after spending almost half a million pounds folded. No sooner had it ended then the "Youth Opportunities Programme" was launched in 1978. More than 450,000 school-leavers went through this scheme when a new project the "Youth Training Scheme" was launched in 1981. Alongside this scheme, a network of Information Technology Education Centres were introduced to train young people in new technology while earning their dole. At the end of the scheme in 1987, the Manpower Services Commission channelled about £15m to the Open College which specialises in open learning with a heavy component of distance education. (see Paine, 1988)

In Canada, similar problems with school-leavers were experienced. By 1984, 1,500,000 people were unemployed, of these 557,000 were school-leavers. (Coleman and Baum, 1985). The Federal government co-operated with individual provinces to create training opportunities for young people. They co-ordinated with the National Association of Youth Clubs to provide a variety of schemes through "Local Employment Assistance and Development"

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(LEAD) centres, Job Corps, whilst in Ontario Career Access points were developed. To date, more than $3 billion has been spent. An interesting project was the "Katimakik" programme, where youths went for training for nine months for $1.00 a day in addition to free room and board. At the end of the training project, participants were given $1,000 to assist them in their attempts to re-enter the job market.

The EEC countries are using various strategies to train and keep young people off the streets. In Germany for example,apprentices are now trained in large college like centres rather than the old style "sitting with Nellie" type of training. In fairness, all governments are sensitive to the plight of the youth, the mistake seems to be that training schemes and the school-leaver problem are regarded as temporary, when they constitute a perennial problem. Murray (1978), is right to describe it as a 'time bomb' since we all know the impact of the 1968 world-wide student uprising. Open learning is regarded as one way to solve this problem.

Open learning:

The historical background of Zimbabwe lends itself to a variety of educational provision for adults and the young. Open learning has been used in rural agricultural extension, community development and health. A variety of governmental and non-governmental organisations combine to combat illiteracy,ignorance and disease. The government has encouraged, and in many instances financed schemes through youth brigades, women's clubs and co-

operatives.Young people are encouraged to run self-help activities but their impact, as elsewhere , has been limited. The difference is that in Zimbabwe, unemployed youth and adults, are only given moral support by the government which really should be doing more, as examples in other countries quoted above have shown. Ndlovu, (1983 p.37 ) has showed that "thousands of potential learners still have no access to formal education because of no fault of their own". Many local authorities are left to their own devices in the fight against youth unemployment. For example, Bulawayo has revived the network of youth clubs it developed during the colonial era in order to keep the youth occupied and public libraries and study groups are playing a major role in the provision of reading facilities. Public libraries have attempted to cooperate in order to provide non- formal learners a place to study.

Library Network.

> Libraries are the storehouses of knowledge and the repositories of mankind's achievements and discoveries. They conserve and transmit our culture. They underpin education both individual and formal. they feature significantly in our economic welfare; they are crucially related to all other intellectual, artistic and creative activities. They are instruments of social and political change. And as the guardians of freedom of thought, they are the bastions of liberty. Thompson, 1974; Quoted by (Stringer, 1983 p.25)

In Zimbabwe libraries have developed all over the country with varying degrees of success. A Zimbabwe government report (1986) estimates that there are about 108 public and special libraries in Zimbabwe. There is also a National Library located in Bulawayo. Even though there have been tremendous efforts to

provide libraries all over the country, the City of Bulawayo seems to have had an advanced library network for a long time. On the other hand, right up to independence, the City of Harare concentrated its library provision on the white communities. The few libraries in the African townships, could not lend books out until recently. There was effectively no "library service" in the true sense of the word. On the other hand, Bulawayo has developed a very advanced library infrastructure which has spread even to poor outlying areas in the Greater Bulawayo district.

## Bulawayo Library Service.

The Bulawayo Public Library first opened its doors in 1896. Ever since then, it has grown and its present building was completed in 1934. The main library served whites only until 1979 and has maintained its subscription philosophy of about Z$15.00 (£5.00) per year.

The Bulawayo Municipal library service ( African Library service) started in a building in Makokoba Township in 1961, under the direction of Karen Jessen. The service has now grown from its headquarters at Mzilikazi library to a chain of seven branch libraries, requiring no subscription except a membership fee of about Z$ 0.5 for children and 0.20 for adults.

The total number of books issued by the Municipal libraries mainly to school leavers, rose from 380,577 in 1979 to more than half a million in 1984. The triennial reports of the Bulawayo Public Library (BPL) show similar increases. On the 6th of May 1978, BPL introduced a mobile library. It was the first of its

kind in Zimbabwe. In 1984, a further development in the provision for unemployed young people was the construction of the Joseph Rowntree study Room.(BPL Third and Fifth Triennial Reports 1980/84).

Besides just lending books, the libraries work closely with other community service groups and respond to the need for extended hours of opening . Libraries are also involved in encouraging young readers through class visits and story times. They also provide a study environment right through the day for children and adults who have nowhere to work because they live in crowded conditions sometimes without electricity. What is more, libraries have instilled a sense of freedom to learn, as young learners take responsibility for the organisation of their study time. All municipal libraries are located in 'high profile' surroundings where administrative offices, clinics, post offices etc. are located. This strategic location of libraries has earned for the library, dignity and importance. Libraries, are places where young unemployed people now tend to gather as they spend most of their time there. (It is ironical that a girl playing truant from school for a whole term was reported to have spent almost all her time in the library).

Special libraries within ministries and colleges also provide an important service to students and the public. Many of these libraries allow part-time students to borrow or use their books. The University of Zimbabwe is of course the biggest special library not only in the country but within the SADCC region. It has a collection of over 350,000 volumes and holds 5,360 titles

of periodicals.

## National Library Service.

The National Free library has witnessed a large increase in both local borrowers and postal ones. Membership increased from 23,273 in 1986 to 27,750; of this number, 9,853 ( 35.5 %) are postal borrowers from all over the country including rural areas. This has far reaching implications for a national open learning system.

There are plans to build a Z$1m national library and documentation centre in Harare and to set up a network of rural libraries within culture houses in all districts. (Government Paper, 1986). Stringer, (1983 p.35) lists the function of such a service. Among the objectives, is included: " operating mobile libraries, library depots and book box services to bring the library service to all the people in the country".

If the library service can be co-ordinated in this way, the benefits to open learning, distance education and national development will be considerable. Libraries also serve to re inforce literacy which is said to be able to decline to almost nil if those educated to primary level do not practise the skills of reading for a long time. (Stringer, 1983). Libraries in Zimbabwe have played a role in the general success of commercial correspondence colleges, without whose support many people in Zimbabwe would have not had an education at all.

## Correspondence education:

The pyramidic nature of Zimbabwean education has led to a long tradition of correspondence education. Its humble beginning followed a recommendation by Mr. Tait from Australia to Mr. Foggin, the then Rhodesian Director of European education, which resulted in the opening of the Rhodesia correspondence school in Salisbury in January 1930 with two white students. By April, the number had increased to forty-two. Wakatama,(1983). Enrolments continued to rise, from 140 in 1931 to 7,786 in 1950. Correspondence education was formalised with the arrival of Miss Christine Marshall from New Zealand in 1950. She was appointed the first full-time headmistress assisted by 11 other school staff, 2 clerks and 2 messengers. Broadcasts to support the correspondence lessons had been started a year earlier in 1949 by Miss Pack. (Wakatama,1983)

The broadcasts were on Wednesdays for forty-five minutes. It will be noted that in traditional Zimbabwe, Wednesday was a holy day and people did not do any work, so were available for those important programmes which did not require manual work. There was cultural coincidence as the white community also reserved Wednesday afternoons for sports, so that those who wanted to listen to broadcasts could do so without affecting their normal jobs.

Later, a Correspondence School Centre was established to send library books to distance education students. All missionary workers' children who learned by correspondence at home were

supported by radio as is the case in Australia. The Correspondence School Centre has survived,it is now the "Open school" and concentrates on preparatory school education. Unfortunately, this school catered for whites only until 1980, blacks had to use commercial correspondence schools.

## Serving the needs of Africans.

Many Africans had also studied ever since 1930 through correspondence schools based in South Africa. The Lyceum College in particular was the most important. The advent of the Federation brought with it about four officially recognised commercial correspondence schools in Zimbabwe. The Central African Correspondence College (C.A.C.C.) was founded in Zimbabwe in 1954. It has concentrated its courses on primary and secondary education, as Sutherland points out:

> Originally founded in 1954 to provide facilities for older literate students who wanted to complete their schooling by correspondence,this private college initially provided for upper primary grades,5,6,and 7. In the early 1960's this was expanded to provide 2-year courses leading to a national examination.... Subsequent expansion was into GCE (O) and A level.
> Sutherland, [1982 p. 2]

Attempts were made to improve student support by conducting two experiments. The first experiment came on the 3rd of April 1965 with the use of radio broadcasts between 9.00- 11 a.m. 300 students were selected mainly from the Masvingo, Mutare and Highfields areas. 138 of the students had radios and were supplied with radio workbooks in Arithmetic and Geography. Wakatama, 1983 confirms that evaluation of the course showed that students with radios did far better than those without and very few students with radios dropped out of their courses.

The second phase of the experiment started on the 9th of October, 1965. The radio broadcasts were between 9.00 a.m. and 10.00 a.m. for 25 minutes each . 2,500 questionnaires were circulated to correspondence students to find out those who had radios and could therefore follow the lessons, 287 or 11.48% were selected. Again, it was confirmed that those students with radios did much better than those without. Earlier in 1963, Cripwell, who was a research fellow in the faculty of Education at the University of Rhodesia, had conducted television experiments on the Rhokana project in Zambia. He proved that illiterate mine workers improved their learning through television. After comparing the two results, Wakatama, (1983 p. 263) concludes that:

> it is important to point out that while these audio-visual aids may be useful in Africa, the use of the radio is most practicable in Central Africa as compared to the use of television.

Of course conditions in Zimbabwe have changed, more people have radios and televisions now than in the early sixties. Unfortunately, as hostilities intensified these experiments were not followed up nor the results they showed taken into account in the planning of distance education provision.

In later years, C.A.C.C. has diversified its courses to help unskilled workers already in employment in a variety of fields including a course in agriculture. C.A.C.C. was for a long time, the only college in Zimbabwe which actually attempted to produce its own courses. C.A.C.C. runs a network of study group assistance, where sponsors of study groups, individual or institutional, are trained in the administration of open

learning. After independence, some institutions have attempted to produce learning materials with limited success. The International Correspondence School (I.C.S.) founded in 1958, is Just a branch of a multinational college. What used to be the I.C.S.' Southern African Regional Office in Harare, has been turned into a private business with rights to use materials and the name. I.C.S. was bought out and does not now exist except in name. The present college cannot therefore guarantee standards and quality of learning materials and books which are offered as part of the learning packages. Rapid Results College and School of Careers both opened in 1955 and serve as local materials distribution agencies. Rapid Results College believes that it offers the best learning materials as it imports all its learning guides from the U.K. Critics, however, view this as the main weakness of the college. After independence a number of colleges mushroomed, but the best known is the Zimbabwe Distance Education College which distributes Wolsey Hall and London Chamber of Commerce courses. A number of their courses are at advanced and degree level. It also has a number of branches around the country. It attempts to provide a limited degree of face-to-face instruction, particularly during school holidays using well qualified school teachers and is developing a few courses at secondary school level.

## Organisation.

The usual organisation of commercial correspondence schools in Zimbabwe has not changed all that much from the early systems. It comprises a central administrative subsystem and a student

sub-system. Communication is usually through print and is one way and is confined to assignments which are marked by part-time tutors.

Sensitive to the interests of both the students and correspondence and independent colleges, the Zimbabwean government drew up a new Education Act in 1987. Part IX pp.32-47, deals specifically with distance education and study groups which in reality is what these independent colleges are. A Department of Non-formal Education has been established within the Ministry of Education. This department has a network of highly qualified education officers in every region who look after the interests of the government by serving as inspectors and trainers.

The Ministry of Education has also established the Zimbabwe Institute of Distance Education (ZIDE) which it is hoped will eventually control all distance education in the country. Its director is also the registrar of correspondence and independent colleges according to the new Act. Safeguards have been introduced for independent learners with the introduction of the Correspondence Colleges Guarantee Fund and the Independent Colleges Guarantee Fund. Education Act,1987 no.5 (p. 39-40). These guarantee funds are meant to be used to minimise loss of fees by students in cases of insolvency by colleges.

Registration of colleges has now been centralised and local education officers provide on-the-spot checks of building standards and hygiene. Certain minimum standards of tuition are now required and mentors are paid by the government provided they

are qualified or at least have five "O" levels. Any registered study group with more than twenty students qualifies for a government grant which is tied to the number of students registered. 'Moral panic' (see Rees and Atkinson, 1982) by the government has led to a relaxation of regulations as long as the interests of students are being served; but they are strict as to who can be allowed as a student:

> Independent colleges may offer tuition only to students who have completed the prescribed period of primary education or who have attained the age of sixteen years, whichever is earlier. Education Act 1987 no.5 p.223.

This is meant to protect young children who are protected by the compulsory education regulations from unscrupulous colleges.

The administrative subsystem co-ordinates the activities of the college. Many of these colleges (except C.A.C.C.) merely order materials from their head offices overseas or cyclostyle copies. When the lecture notes are received, then they are distributed to branches around the country or sent directly to students who have paid for them through the post office. It is interesting that people can actually pay for some correspondence courses through the general post office. The administrative system does nothing more than advertise courses wherever they can, appoint part-time markers and receive their fees. In short, this system is usually confined to clerical work. Communication with students other than for the return of assignments and demand for fees is rare. It cannot be denied that the main motive is making a profit.

The student subsystem includes the mentors, study groups in some cases and the learning materials. There is a long history of

study groups which started in 1962 as a response by some
non-governmental volunteer groups to provide something for
unemployed school leavers. Many courses usually last about two
hours per day per subject and students just attend those
sessions they need. They then spend the rest of the day in a
library where they wait for their next lesson. Mentors usually
just provide a reading atmosphere by providing study places,
maintaining discipline and just occasionally offer support to
learners studying correspondence materials. Real tuition is
provided by correspondence colleges and independent colleges
offer motivational support by providing the learning environment.

Colleges advertise the particular level of their courses. It is
up to the individual to decide the level s/he wants to attempt.
There is no evidence that commercial colleges ask for proof of
previous qualifications from prospective students. As a result
many students register for courses which they clearly cannot
manage, as drop out figures show, Sutherland (1982). There is
little reason to believe that this strategy is on philosophical
grounds (eg liberal/radical view) as is the case at the OUUK,
rather the decision to register every one may be purely economic.
Those colleges preparing students for external examinations seem
prepared to give students extra help, but it is not uncommon for
some colleges, which prepare students for their own certificates,
to award diplomas to students after three or six months of
private study. But on the whole many private colleges have given
Africans an opportunity to study certain courses even contrary to
government opinion during the colonial era. What the

correspondence colleges can achieve by way of giving students support is limited by the existing infrastructure and what students can afford.

## Increasing access in the formal education sector.

Past experience in correspondence education has made it possible for post independence Zimbabwe to experiment widely in the use of distance education. Ever since independence, distance education of one form or another has been used in teacher education, secondary schools and at the University of Zimbabwe.

## Teacher education.

The discussion on the professional development of teachers in chapter two showed how the teaching profession slowly evolved into a quality service with the increasing supply of qualified secondary recruits. By 1980, almost all teacher training required 5 "0" levels and was of three years' duration full-time.

Total primary school enrolments jumped from 819 128 in 1979 to 1,635,994 in 1980. Secondary school numbers remained stable moving from 73 540 in 1979 to just 74 966 in 1980 because of lack of school vacancies. By the end of 1981, primary school enrolments had trebled and yet there were only 35,000 teachers. The assistance of untrained teachers boosted the number of teachers by 1983 to over 54,000. However more than half of these teachers were untrained. There was an urgent call not only for more teachers but for orientation and in-service courses as well. Various strategies were adopted: 1) enrolments in all teachers' colleges were increased from 2,824 in 1980 to 9,504 in 1985. 2)

New colleges were built. Teacher training reform was initiated with the introduction of sandwich courses, (Zimbabwe Integrated National Teacher Education Course) ZINTEC. 4) Part-time upgrading courses were introduced and the B.Ed intake at the University of Zimbabwe was increased and more courses were added. Reform in Teacher education in Zimbabwe is well documented and researched.

Zvobgo 1986, published his Ph.D thesis as a book on educational reform in Zimbabwe since independence and deals with the issue of teacher education in detail. (see pp.82 -106.) Zvobgo raises critical. For example, he discusses planning options and their consequences and warns both critics and practitioners that:

> Revolution in education is not an event. It is a process which occurs over time. Many changes in our education system as a whole will continue to be influenced by socio-economic and political dynamics that determine and direct all forms of changes. Zvobgo, (1986 p.105)

He is one of the writers who have cited frequent changes in staff both in the field and at senior level as contributing to lack of continuity and low morale. As he points out, "for example Zintec has had three directors in three years".

Since Zintec is well documented, (Gatawa, 1982; 1886a; 1986b; Chivore, 1986a and b; Mutumbuka, 1986; Madzokere, 1985 etc.) we shall confine the description of its structure and activities to a very brief statement.

Zintec is a distance teacher education programme which began in January 1981. It is almost wholly Zimbabwean funded, but it received UNICEF assistance with materials and vehicles. Three of the colleges were run from existing schools and the other

regional college was administered from temporary accommodation until 1984.

The training programme begins with a sixteen week residential programme followed by short periods of face-to-face sessions over three and half years. During this time students are placed in full-time paid teaching posts in rural areas. They continue with their training through distance education. They receive modules at the rate of four modules per school term and are required to submit two tutor marked assignments. After every two terms, students attend two-week long vacation courses and fortnightly school-based problem solving sessions. In addition to all this they are expected to carry on normal community based projects for rural teachers. Gatawa, (1986a p.18-19). They spend the last sixteen weeks of their training in a college to prepare for and take their exams. In all, about 15,000 teachers had been trained by April, 1988 when the project ended. Gatawa, (1986a p.22) concludes that; "In spite of problems, the programme has met the targets set for it".

The Teachers' Forum observes also that:

> the general feeling of most people involved in its
> implementation is that it has had such a positive influence on
> education in Zimbabwe that we cannot do without it.
> (Teachers'Forum, 1985 p.7)

The National evaluation and report on Zintec indicates clearly that:

> The success of Zintec revealed by the evaluation exercise
> resulted in the "Zintecisation" of teacher training
> colleges. Gatawa, (1986a p.28).

Chivore, 1986a and 1986b also writes about Teacher education in post independence Zimbabwe. He focuses his attention on the

growing trend of distance teacher education in conventional colleges. Teacher training is now of four years duration with the first and the fourth year spent on paid full-time teaching but Chivore (1986a p.46) observes that:

> Lecturers at non-graduate secondary training colleges did not have the training nor the expertise in the production of distance education materials for students deployed in the field. The same applied to the Associate College Centre of the University of Zimbabwe. At the same time, these lecturers did not have proper orientation on suitable teaching methods that could be used under the new four year training pattern.

The problems which face distance teacher education are similar to those met by other distance education systems discussed in chapter four. Most of the problems seem to be in keeping students motivated by providing adequate support; choice and production of learning materials, finance and administrative matters. That Zintec had very few dropouts may have been due to both financial incentives and the need for a professional qualification. In examining the results of this study, we shall discuss this issue further to see if it is a significant factor in student motivation.

Zimbabwe Science Project.

Zim-Sci is an on-going project which is jointly run by the Science Education Centre at the University of Zimbabwe and the Curriculum Development Unit of the Ministry of Education. The project was begun after independence to circumvent the shortage of science teachers and laboratories. Like Zintec, it is also well documented and evaluated. (see Mutumbuka, 1986, Zimbabwe Government paper, 1982 etc.)

The programme produces cost-effective science apparatus in the form of kits, teachers' and pupils' books designed to promote a hands-on approach to learning science in rural secondary schools, (Upper-Tops).

Even though this project is not entirely distance education, important lessons have been learnt in distributing bulk learning materials to rural areas. As the project developed simultaneously with Zintec there was a lot of sharing of important information about programme evaluation and distribution problems.

The Zim-Sci concept has now been extended to the fourth year of secondary school but its impact is yet to be felt. If examination success at "O" level is to be used as a yardstick, Zim-Sci has not achieved much so far. At the moment the blame is put on ill-qualified teachers, but the examples provided by Mike Pentz on teaching science at a distance may help to lift he quality of science taught. (BBC 1988).

The formation of the Zimbabwe Institute of Distance Education by the Ministry of Education has led to more experiments in secondary schools. For example in 1985/86 the Ministry experimented in teaching selected secondary pupils face-to-face for half the year and used distance instruction for the rest of the year. Results of the experiments have not been generally available, but it is believed to have been well received. In 1987, another experiment with 18 secondary teachers from all over the country was planned to use a combination of distance education and traditional teaching. It is understood that

different measuring instruments were used. Again the results are not yet generally available, but there is no doubt that when these results are published, they will prove useful for future developments. If the materials are of good quality and support is given to the teacher and pupils, it will be possible to induce overwhelming interest from pupils, as Noyau, (1982 p.94) reported on the success of the English teaching experiment in Mauritius under similar circumstances.

Transport and communication.

Evidence from previous chapters shows that distance education is now a very technical and sophisticated concept which not only relies on the existing communications infrastructure, but but has forced the creation of its own technology ,such as is illustrated by the OUUK Cyclops project, discussed in chapter five. Even in the early days of correspondence education, Holmberg, (1986) reveals that in England the advent of the penny post was the basis of Pitman's correspondence shorthand courses in the late eighteenth century. Holmberg, (1986 p.7) writes:

> Another early attempt to organise distance education was made in England by Sir Isaac Pitman who reduced the main principles of his shorthand system to fit into postcards. This teaching of shorthand ... began in the year 1840 when in the United Kingdom the uniform penny postage was introduced.

In the United States, Caleb Philips used the newspaper to place his advertisement of correspondence shorthand courses in 1728. In Sweden a weekly magazine carried the first distance education advertisements. (Holmberg, 1986).

Fig. 8.1 **Map of Zimbabwe showing main towns and infrastructure.**
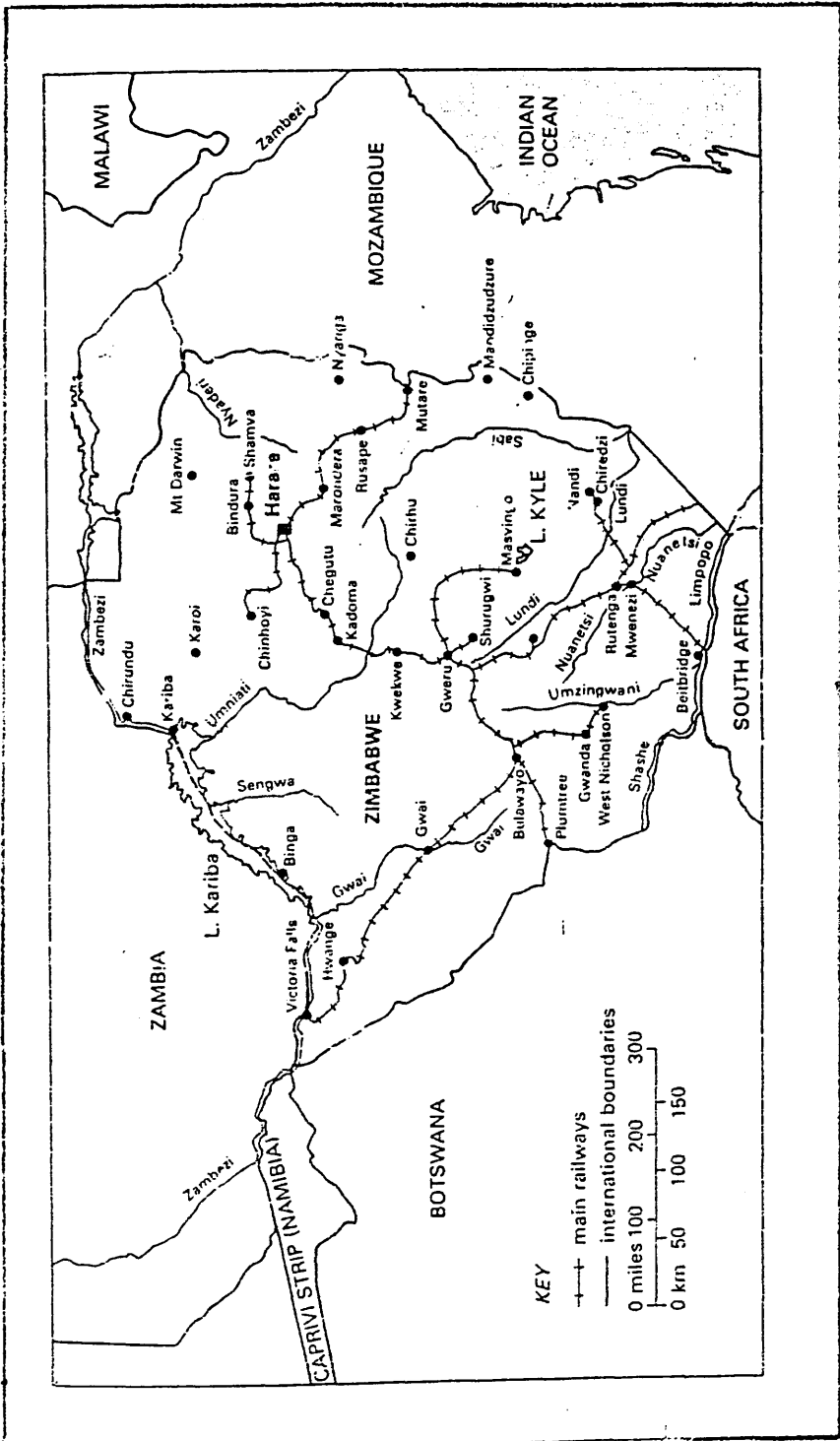
The impact of the post on socio-economic development of nations was accelerated by the international introduction of the "standardised postage stamp" following proposals by Rowland Hill, a Briton in 1840. "Montgomery Blair, Postmaster-General of the United States of America initiated the first international meeting with a view of reaching a common postal agreement". The first such meeting was in Paris on the 11th of May 1863. Sunday Mail (9/10/88 p.4). Growing international trade forced the rapid development of the post which led to a second international meeting prompted by a German, Heinrich Von Stephan in Berne Switzerland on the 15th of September, 1874. A treaty was signed after the meeting establishing the first collective convention governing the international postal service "General Postal Union" (now known as Universal Postal Union or UPU) in 1875. This treaty effectively established a new form of co-operation among the nations of the world and created "a one mail territory" guaranteeing the passage of mail through any member country to its destinations. In 1948, UPU became a United Nations agency, with almost all the countries of the world as members. Guaranteed mail delivery across national boundaries led to the spread of correspondence education mentioned above as well as the creation of correspondence colleges like Wolsey Hall. Holmberg, (1986).

Nowadays, multi-media strategies are increasingly being adopted in distance education systems in addition to the post, where broadcasting, telephones, satellites and computers are combined. Some countries still lag behind, as is the case with Zimbabwe and other developing countries in general. Road and rail

transport difficulties still hamper developments which are
dependent on them.

Terrestrial transport systems.

Zimbabwe is a "land locked" country as the road and rail networks
pass through Botswana, South Africa and Mozambique in order to
reach seaports which are vital to Zimbabwe's exports. The
shortest route is through Beira in Mozambique, but both the rail
and road routes are very insecure because of the activities of
the MNR (Mozambique National Resistance Movement) which is South
African supported.

In order to survive, Zimbabwe has had to defend the railway line
including its vital Beira oil pipeline; which is the only oil
supply route to Zimbabwe. In real terms, the heavy military
presence inside Mozambique of protective Zimbabwean troops has
increased the cost of Zimbabwean exports, making them
uncompetitive internationally. Because the Mozambican economy has
collapsed, even roads going through to Malawi via Tete are
maintained with the assistance of Zimbabweans. The Zimbabwean
government has thus formed a parastatal company, "The Beira
Corridor" to help develop the port of Beira under the management
of Eddie Cross. Some observers indicate that a lot has been
achieved, but the vulnerability of the railway line has led to
caution in the use of this route by business people who prefer a
longer and yet reliable route through Durban and Port Elizabeth
in South Africa.

The South Africans have from time to time reminded the

Zimbabweans about the importance of this route by closing it or using delaying tactics in clearing Zimbabwean exports at the border. Moreover, it was noted in chapter two that during U.D.I. Zimbabwean companies relied entirely on South African exports and imports. It has proved extremely difficult to find alternative markets. Even when these markets are found in Africa, both the Tanzam (Tanzania/Zambia) and the Benguela (Angola) railway lines have proved not only too expensive, but also dangerous and vulnerable to guerrilla attacks. The port of Dar-essalam has been perceived by Zimbabwean business people as being unreliable even though things are said to be improving now. Sometimes many of the potential markets are in countries which are unable to pay as they depend on foreign loans, from countries where they are supposed to receive their supplies from.[1]

Economic realities have forced the Zimbabwean government to maintain a trade mission in South Africa in order to service its vital business interests. The free flow of traffic between the two countries has sometimes left the Zimbabweans vulnerable to South African insurgents, but this has generally been accepted by Zimbabweans as a fair price to pay for their economic survival. That a lot of these insurgents are caught and brought to fair and public trial may be viewed by many as being on the credit side of the Zimbabwean government .

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[1] In 1981-2 Zambia bought maize from the USA despite that Zimbabwe had a bumper harvest. In 1987, at the height of Mozambican starvation, all Zimbabwe needed was transport to ship maize supplies across, but maize was sent from the USA, sometimes flown in.

Contrary to the external road and rail infrastructure, the internal communications network is fairly developed as the report in the First Five-Year plan (1986-1990 p.35) shows.

> Adequate roads and transport services in rural areas are a prerequisite to continued economic and social development, especially in communal areas where access to national markets is still difficult.

Great progress has been made in improving both internal and external transport systems. There are more than 3,400 km of 1.067 m gauge railway track within Zimbabwe connecting all the major towns and mining villages. This narrow gauge line has caused problems in using imported railway engines and stock. Because they are designed for wider railway tracks. Of particular concern were those from Canada which has been a major provider and donor of electric engines. In spite of these problems, the railway line from Harare to Gweru has been electrified resulting in saving fuel. Plans are being made to use trains between Harare and Chitungwiza which is Harare's feeder city in order to ease congestion in road transport. Congestion on roads has been so bad that the working pattern in Zimbabwe has been forced to adapt by introducing staggered work starting and finishing times.

Roads have also been developed, and the primary road plan is said to be nearing completion, which will allow the government to concentrate on secondary and feeder roads in rural areas. There are now 18 639 km of primary all weather roads, 4, 854 km of two-lane bituminous surfaced roads and 1 461 km of single-lane. Continued upgrading of old type strip roads has left only 73 km of these still in use. Gravel roads still play a major part in

Zimbabwe's road network, about 10 382 km account for these types of roads. In addition, there are more than 61 630 km of roads under rural and local authorities. (Zimbabwe in brief, p.46)

The road network makes it possible for public transport to service rural areas and carry mail as well. But there are still many areas with very few buses where people have to walk long distances in order to catch a bus while popular routes are congested.[2] Road traffic is vital to Zimbabwe and consumes about 60% of all imported fuel. Road transport is however affected by foreign currency the most and there are currently shortages in spare parts. Long delays are sometimes experienced by travellers particularly during peak travel times. Cancellations of scheduled bus timetables are common leaving some rural services disrupted.

The National Airline has continued to grow too. It has helped to increase internal traffic as well as servicing an increasing load of international routes. Carrying airmail is a major part of its activities. Whereas in 1979, 276,300 kg of mail was carried during the whole year, in the first half of 1986, 935,200 kg of mail was carried. Internal mail traffic has increased and efficiency continues to improve all the time. Letters posted to and from major towns are expected to reach their destinations within one to three days due to improved transport.

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[2] Because of the bumper harvest many small rural farmers have failed to get private couriers to transport their produce to national markets before the rainy season. In September, 1988, the government had to "withdraw all DDF and CMED trucks from normal operations and redeployed them to ease the plight of communal farmers whose grain has piled up on the roadside for lack of transport". (The Sunday Mail, 18th September, 1988)

## Posts and telecommunications.

It is a fact that without posts and telecommunications, distance education is almost impossible. In Zimbabwe, a parastatal body, the Posts and Telecommunication Corporation (P.T.C.) controls and operates all normal postal, telegraph and telephone services. In addition, the Post Office carries out a dozen or so other functions for the government and other local authorities : collecting school fees, Expedited Mail Service, issuing all licences, etc.

"The first postal service in Zimbabwe was introduced in 1888 by Rev. J.S. Moffat the son of the missionary Robert Moffat, on the route between Mafeking (in South Africa) and Qubulawayo (now Bulawayo)" (Sunday Mail, 1988 ). By 1892, there were about 22 post offices in all the towns and the first street posting box was in Harare in 1902. Door-to-door delivery as we know it today began in Harare in 1911 and spread to the other towns about fourteen years later. Sadly due to restrictions on blacks discussed in chapter two, it was not until 1953 (with the formation of the Federation of Rhodesia and Nyasaland) that the first post office to serve Africans was built at Mzilikazi in Bulawayo. But the development of the post to all sections of the country were inevitable in line with industrial advancement, and at independence this process was speeded up by building and introducing post offices everywhere.

Current government policy encourages the provision of communication services within easy reach of the population as recommended by international standards. Postal services are

currently provided within the five regions as follows:

Table 8.1 Geographical distribution of Post Offices.

| REGION | AREA km² | POPULATION | % | DENSITY per km² | POST OFFIC. |
|---|---|---|---|---|---|
| ZIMBABWE (T) | 390 759 | 7 546 759 | 100 | 19.3 | 298 |
| Mashonaland | 112 685 | 2 918 353 | 38.7 | 94.9 | 106 |
| Matabeleland | 139 927 | 1 404 975 | 19.8 | 18.4 | 73 |
| Manicaland | 34 870 | 1 099 202 | 14.6 | 31.5 | 42 |
| Midlands | 58 967 | 1 091 844 | 14.5 | 18.5 | 31 |
| Masvingo | 44 310 | 1 031 697 | 13.7 | 23.3 | 46 |

Source: 1982 Population Census 1985 p.41[3]

P.T.C. official figures show that each rural post office serves about 89 000 people and 18 000 in urban areas. The national postal service density is estimated at about 44,000 people per Post Office. Postmaster General, (1988). Since the national density is about 19 people per square kilometre, it may appear as if people in rural areas have to travel long distances to get to a post office. In reality however, because of the land Apportionment laws, rural population is not as sparse as it would otherwise be. More than 25% of the country is game park land or forest area without human habitation. People living in rural areas, except those in large commercial farms, tend to be in

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[3] Matabeleland and Mashonaland figures were the result of adding together the several provinces within each region. Post Office figures are my own addition, figures were received from both the Post Master general and The Director P.T.C. Head Office. Programmes is also very doubtful, thus high licences are imposed as a deterrent to many people seeing these foreign programmes.

orderly clusters with the largest concentrations being in Maswingo and Mashonaland. This would tend to reduce the actual distance to the nearest post office which is still on average about 18-20 km away. Rural mail is carried by public transport contracted to the P.T.C. This system includes the National railways, private couriers and rural bus operators. International mail is carried by the national airline which flies to several domestic and international destinations.

Telephone networks:

The telephone system in Zimbabwe is fairly developed but much of the infrastructure was destroyed during the civil war. Even then it was the case that:

> There are 100 telephone exchanges scattered throughout the country serving both urban and rural areas. These exchanges have a total capacity of 160 000 lines of which 116,000 lines are in use. Each telephone exchange provides service to a defined geographical area of up to 40km radius. ... therefore there is no part of the country which does not fall within an exchange area. (Postmaster General, 1988 p.2)

The Postmaster General, however, warns that:

> use of telecommunications facilities are dependent on socio-economic development of each area serviced by the exchange. In some areas because of the low economic development and literacy the telephone facilities provided are not fully utilised. (ibid)

The national telephone density is estimated at about 3.38 telephones per 100 people. Facilities for possible teleconferences are limited to Gweru where a new telephone exchange has been commissioned. Even there, this facility has not been used as it is not yet in demand.

Satellite Communications.

Zimbabwe is linked to the international world through an earth satellite station. The Mazoe earth station just outside Harare provides connecting facilities through the Atlantic Ocean region Intelsat V series satellite. This station uses a type A antenna and became operational on the 9th of July 1985.

There are plans to establish a second antenna which will operate through the Indian Ocean Intelsat satellite. The Zimbabwe Broadcasting Corporation, (ZBC) has installed a satellite antenna which will make it possible for the corporation to receive international news quickly rather than after a day or two after the events. Microwave links are possible between Harare and Bulawayo ZBC studios. Currently this link is used for conveying the main news at 8.00 o'clock to Bulawayo. It is possible to receive television satellite signals directly from Intelsat in a direct broadcasting format. At the moment very few people are able to get satellite dishes as they are very expensive. The licence for these dishes seems high for many people, about $1 000 (£350.00). Because of costs, satellite broadcasting is not generally available. Legal issues are still to be sorted out, as to the implications of ZBC issuing licences for programmes it cannot control nor guarantee their continued provision as many satellite stations are scrambling their programmes as protection from illegal receivers. The quality of these programmes is currently not very good.

Within the SADCC region, there are plans to establish a regional inter-connectivity satellite communication system to service both

regional and national communication network. In order for satellite broadcasting to be useful, it needs to align itself to general broadcasting needs within Zimbabwe.

## Broadcasting.

Background: Many radio broadcasting experiments were carried out by post office engineers within Zimbabwe as far back as 1922. Sibanda (1986). Intensified efforts and collaboration with the Southern Rhodesia government finally led to the introduction of national radio broadcasting on the 22 nd of May 1932. (Rhodesia Herald, 23rd May, 1932 p.15) This made Zimbabwe the fourth African country to utilise broadcasting. Radio broadcasting developed from just four hours a day to a full service which currently has four channels. Kangai 1988, reports that: " reception coverage for radio channels is 100% of the country..".

Another important development was the introduction of television in the Federation of Rhodesia and Nyasaland in September 1959. Sibanda, (1986 p.23). There were reception and programming problems from the very beginning which are yet to be solved, as television still covers just about 50% of the country and mainly in towns. An important factor is that television was regarded as an educational medium in the 1960s. By 1964, 101 sets had been installed in White schools and 30 in African schools. The lack of recording facilities and reception problems limited the impact of television broadcasting. Use of 16mm film was encouraged in schools for whites supported by Audio visual services, which is a department within the Ministry of Education.

Broadcasting and other media in Zimbabwe have a long history of government control. During the liberation struggle, radio and newspapers played a very important part in influencing public opinion. The Smith government under UDI used radio for persuasion and propaganda. They attempted to portray freedom fighters as vicious communists and exaggerated any incident by them against local people. In 1974, a type of radio which received FM only was designed in order that Zimbabweans would not be able to listen to foreign stations. Despite free licence inducements, the radio was not popular as people continued to listen to the "Voice of Zimbabwe" broadcasting from neighbouring countries. Thousands of people joined the liberation struggle by following radio instructions. Educational radio broadcasts from inside Zimbabwe were used by children in refugee camps in order to continue with their education.

At independence in 1980, returning freedom fighters bought radios in such large numbers that a shortage was created. Radio has a special place in Zimbabwean society and the 1983 "All Media Survey" showed that more than 66.8% of homes possess a radio of some kind. Tentative suggestions have been made that, the News black-out out during UDI backfired as it produced a news conscious society. By listening to the BBC External service and other stations, it was possible to follow developments concerning the independence of Zimbabwe, which was not possible from inside the country. The importance of radio can also be illustrated with an incident in Zimbabwe after independence. Sections of the community which felt that their views were not conveyed on radio

attempted to physically attack a transmitting station in 1981.

Educational broadcasting.

The white community have used educational radio ever since 1942 and television was first used in 1961. Blacks have been able to utilise broadcasts from 1962 when record players were circulated to some government schools to play recordings of standard I spoken English. Sibanda, (1986 p.28). Open circuit broadcasts were first used for African primary schools in 1964 in selected schools, one being Mazoe Primary school outside Harare.

Adult education programmes have always been an important feature of Zimbabwean broadcasting. In 1962, a need to educate teachers in the new medium and curriculum led to the introduction of a Saturday morning programme for teachers. Ever since that time, the teachers' programme has been maintained changing only in the days and times of transmission. All possible times have been tried in response to teachers requests. Because of limited recording facilities in schools, broadcasts are taken live in many rural schools.

Agricultural and health programmes have been available for a long time and they still appear to be very popular even though there are few studies to support this claim. There has been no dedicated campaign such as the Tanzanian 'Muti Wafuraka' (Ball 1973) and 'Mother and child health in Mauritius' (Mamet, 1982). Issues on health and agriculture are raised generally but lack concentration and publicity. For example, a World Health Organisation supported campaign on "Nutrition in rural Zimbabwe"

in 1984, was noticed by very few people.

"Kudidza akuperi ", (Learning does not end) is a radio programme which is supported by C.A.C.C. which lasts for about an hour between 1.00 and 2.00 o'clock every Sunday afternoons on Radio II. That this programme has been on the air for over twenty years is a mark for its success. The programme is meant to be a resource for adult learners and tackles different issues each week, which include interviews with prominent people in all walks of life. Because the programmes are resource based, they lack subject focus which appears to be what most adult learners require in Zimbabwe.

The Zimbabwe Distance Education College used Radio III ( which is a popular station with the young and school leavers) to transmit five to ten minute programmes on general study techniques of different subjects. They used interviews with their own part-time subject specialists and occasionally visiting scholars to enhance publicity, at about 10.00 o'clock on Sunday mornings. This has proved to be a very popular time ,as many people are generally at home at that time.

There are currently four radio and two television channels available in Zimbabwe. The second television channel is still confined to the Harare area but Z$2.5m has been earmarked to extend the service to other areas in the country. Radio Four is the educational channel which combines all the preschool, primary, secondary, teachers' programmes as well as other further education programmes. The problem is that the impact of most of

these programmes is minimal and the people who really need them do not seem to be utilising the service.

The Future.

An examination of existing Open learning dynamics in Zimbabwe has revealed that there is a well established learning culture. The communications infrastructure and the economy seem able to sustain open learning in many forms, but there is a potentially explosive situation as there is widespread youth unemployment, coupled with general unemployment, youngsters' chance to train and get a job have never been more remote. What is not well known, is what the University of Zimbabwe is doing in the field of open learning. There is a need to find out how existing part-time university students use technology and the available infrastructure before suggestions can be made as to the direction to be taken in increasing access to further and higher education.

The main worry in the current provision of distance education in Zimbabwe is the obsession with profit which is reminiscent of the colonial era. There are too many cottage industry type of colleges, which makes the industry too fragmented to supervise effectively. An analysis of questionnaire returns may assist in giving direction to our proposed model in chapter nine.

# PART V

# CHAPTER 9

## QUESTIONNAIRE SURVEY

### AIMS:

The questionnaire survey was central to this study. Because the target population were students at the University of Zimbabwe, practical considerations made it the only way the students could be reached. The aims of the questionnaire survey were to:

- find out the extent of distance education provision at the University of Zimbabwe.

- discover the geodemographics of the part-time students, their time geography and available support infrastructure.

- focus on student problems in studying at a distance, as reflected by their reasons for study and their motivation.

- identify the media and other study materials currently used by students for their studies and which they prefer and find the most useful.

- examine the student support system for part-time students at the UZ, from a student's perspective.

- find out the costs of studying part-time at UZ.

- assess the role of libraries and potential student support communications infrastructure.

### Questionnaire design.

There are several ways by which information could have been collected from students, the best one being structured interviews. Because of practical problems of cost and time, a mailed questionnaire was conidered the best alternative. One questionnaire was designed. The issues raised by the

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guided by the main research questions raised in chapter one. Some ideas on student problems and motivation in the questionnaire came from McIntosh et al (1976 pp.303-318). The media and materials section, benefited immensely from several studies by Bates, (1972, 1980 and 1987). Issues related to geodemographics and general distance education questionnaire design, are a reflection of Graff, Holmberg et al's,(1988) study on international distance education. The aspects of the questionnaire dealing with student support, were filtered from Northcott and Shapcott's (1986) Australian study, on the role of study centres in overall student support.

The questionnaire had a total of 54 questions divided into six sections. Section I covered the general aspects concering the students and courses. Sections II and III focused on student support, especially on media and study materials. Section IV extended the concept of student support, which included testing the acceptability of the concept of a mobile study centre. A mobile study centre was considered economic, as UZ part-time students are few and widely scattered. Costs of studying part-time are crucial and can reveal the real reasons of studying; Section V was therefore concerned with costs. The issues of motivation and reasons for studying were tackled last in Section VI. (see appendix A for a copy of the questionnaire)

As is usual, a cover letter was included, as part of the questionnaire. The questionnaires were to be returned to the Chairman of the Centre of Educational Technology at the University of Zimbabwe. The chairman in turn assigned the task of

versity of Zimbabwe. The chairman in turn assigned the task of distributing and collecting the questionnaires to a third party. In all, the questionnaire, was seven pages long. The primary objective was to make it as comprehensive as possible. As such two pilot studies were conducted, the first pilot, was used, like a 'trial balloon'.

## The pilot study

Stage I: The first pilot questionnaire was divided into five sections corresponding exactly with the main questionnaire, (see appendix B) it had a total of forty-five questions.

Twelve African students studying a variety of courses at Stirling University were asked to fill in the questionnaire and nine usable replies were received. Analysis of results revealed that several questions were not clear. Question 14 and 16 for example were double-barrelled as it asked for too much information. Inadequate space had been provided for answers. The general criticism by all respondents and my supervisor was that there was not enough space provided for qualitative replies.

Detailed follow-up discussions were held with six of the respondents, which resulted in the simplification of several questions and the addition of two questions on motivation. After several consultations, the questionnaire in appendix C was produced. This served as the basis for the second pilot study.

Stage II:
It was decided to administer the second pilot questionnaire on a

small sample of Open University students who were attending Summer school in June/July, 1988. For understandable reasons, permission to undertake a systematic random sample was not received from the local OU office. With the encouragement of my supervisor, ( who had volunteered to distribute some of the Questionnaires informally) an informal approach was made to OU students randomly found in the common rooms of Murray Hall and Andrew Stewart Halls where the students were staying for their summer courses. It turned out that Arts and Social science students were accommodated in Murray Hall and Science and Technology students were living in Andrew Stewart Hall. Ten questionnaires were filled in by arts and social science students on the first evening. The second evening was spent in the common room in Andrew Stewart Hall. There was sympathetic and enthusiastic response from students when the investigator explained the purpose of his project and added that he had been unable to get official permission. The supply of questionnaires ran out, leaving many eager participants unable to help. A discussion, on problems of studying at a distance conducted while waiting for those with copies of the questionnaires to fill them in, drew a large crowd. Two OU tutors found themselves involved in the discussion.

Out of the twenty questionnaires returned, sixteen of them were usable. On the whole, students were satisfied that the questionnaire was clear and raised pertinent issues. One respondent, summed up the mood, commenting on question number 48 which was about motivation, said:

" I love it "

The pilot questionnaire was taken very seriously by OU students, to the extent that some of the information they provided will be used in this chapter for comparative purposes on the key issues of: who the students are, the extent of support media and materials provision, costs and motivation.

Many issues raised by McIntosh et al (1976 and 1980) on OU students were confirmed. On the age group of students for example, this sample of 16 students shows that:

- 68.75% of the students are between 21-35 years.

- 25% are between 36 - 45 years.

- 6.25% (1) is over 56 years of age.

McIntosh, (1980 p. 22) compared the age groups of OU (UK) students over three years.

Table 9.1

Age group of OU students.

|                      | 1974   | 1975   | 1976   | Total   |
|----------------------|--------|--------|--------|---------|
| Base- all applicants | 34,017 | 50,742 | 51,571 | 136,330 |
|                      | %      | %      | %      | %       |
| age of applicants    |        |        |        |         |
| under 21             | 2.3    | 2.4    | 2.2    | 2.3     |
| over 21              | 97.7   | 97.6   | 97.8   | 97.7    |

The majority of the students were between 21 and 35 years of age. There is thus a striking similarity between OU students and part-time students at the UZ as far as age is concerned. Out of 154 valid responses, 115 (74.5%) of the students are in the age group 21-35 years. 35 (22.9%) are between 35 and 45 years and

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only one (.6% ) is over 45 years old.

Similarities were also found in marital status, motivation and study time. Major differences between OU an UZ students were found however in the use and availability of media, libraries, availability of books and and the level of support expected from tutors. Details of these results will be discussed later, but it serves to point out how useful the second pilot study turned out to be. Having confirmed the value of the pilot study, we shall return to it occassionally. At the moment, the discussion will focus on the logistics of the questionnaire.

Strategic Planning.

As the design for the pilot questionnaire progressed, strategic planning continued. Steps taken included the following:

- permission to administer the questionnaire was sought from the Registrar at the University of Zimbabwe. That permission was granted on the 14th of March, 1988. (see appendix D)

- visits to the FernUniversitat, in Hagen, West Germany, to the OU (UK) and to several other relevant places were undertaken between December, 1986 and May, 1989. Valuable advice and examples of questionnaires were collected as explained in Chapter one.

- contacts with relevant sources in Zimbabwe, Post office staff, Zimbabwe Broadcasting Corporation, Current president of the African Association for Distance Education, SADCC Secretariat, Librarians at the National

Free Library of Zimbabwe and Bulawayo Municipal libraries
were established. (see appendices E - G)

. liaison with the chairman of CET at UZ was established, who
agreed to distribute and collect the questionnaires.

. the academic Registrar, at UZ, also supplied a computer
print out of all part-time students, which arrived in June,
1988. The idea to design a questionnaire for members of
staff was dropped when a list of available staff members
could not be made available. Additional constraints,
against conducting a large-scale study were time and cost.

When the list of students was received, sampling and the actual
job related to posting the questionnaires began.

The Sample.

In 1988, there were 1,117 part-time students in the target
population and a sample of 400 (35.8%) was considered
statistically adequate by the computer advisory service at
Stirling University, for results to be analysed on the Vax.
Graphs of the target population and the stratified sample are as
shown in figures 9.1 and 9.2 in the next page.

In order to select the sample as scientifically as possible, two
sets of random numbers were generated; one on 'Statgraphics' (see
an example in appendix H) and the other on on the Vax. The list
of students' names was divided into male and female and then by
subject in order to ensure stratified weighting. On the advice of
the Computer Advisory Service, it was decided to use random
numbers generated by the Vax, which had a larger frame than

statgraphics, and also because it included the only engineering student. Female and male random numbers were generated separately.

There were 307 women in the target population and 810 men. It was decided that a sample with 100 women and 300 men would adequately represent all the groups, particularly the women. All the names were allocated a random number within the sampling frame. In order to compile the sample, names were just chosen by going down the random number list until the required number of names were on the list. Some numbers were repeated , this meant that the next number was selected, just crossing out the repeat.

It was fortunate that the computer print out from UZ had been as requested, with male and female lists by course; this meant that the stratified sampling job was completed faster than could have been otherwise.

In order to facilitate speedy distribution, questionnaires were put into addressed envelopes and grouped by course and level of study. In addition, each questionnaire had its random number written on the top right corner in order to facilitate identification when required. The list of numbers and identification codes were retained by the researcher in order to protect respondents who had been assured confidentiality. As such, no names were required on the questionnaire itself. Even though a lot of care was taken to see that the exercise went smoothly, a few questionnaires seem to have been received by students not included in the random sample. Luckily, their

presence does not distort the main results , as they are also part-time students.[1] But this may explain the disproprotionate response from students from Matabeleland, as figure9.3 will show.

For economic reasons, questionnaires were sent in one large parcel to the Chairman of CET at UZ. The parcel was sent on the 5th of August,1988, in order to coincide with students on residential study. The questionnaires were to be handed to groups of students as they came through for their residential sessions in order to avoid further mailing expenses. Requests for timetables of these face-to-face sessions proved fruitless.

The author spent an anxious four months waiting for a confirmation that the questionnaire parcel had arrived. Very little seemed to be happening until November, 1988, when a letter was received from CET at UZ that about 160 returns (of which 158 /39.5% were usable) had been collected and that the author should send postage, as CET had run out of its mailing vote. Even though a cheque was sent, assistance from friends in Zimbabwe, saw the parcel arrive back to Stirling in January, 1989. The department of Film and Media at Stirling University offered considerable assistance in the printing and mailing of the questionnaires.

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[1] Larry Leslie, (1972) argues convincingly, that high response rates do not make much difference to results. He concludes that: "... when surveys are made of homogeneous populations (persons having some strong group identity) concerning their attitudes, opinions, perspectives, etc., toward issues concerning the group, significant response-rate bias is probably unlikely". (abstract)

## Methods

This section of the chapter will be divided into three parts:

. Questionnaire analysis systems design.

. Data analysis

. Summary of main problems of studying at a distance.

A discussion on each will follow.

## Questionnaire analysis systems design: Software.

158 (14.1 % of the target population) returns may seem modest, but the task of analysing the results was daunting and could not have been done manually in the limited time available. Some statistical procedures could not be easily conducted manually.

The first task in the systems design was to re-examine the hypotheses and major research questions raised in chapter one, in order to select the appropriate software. Most of the questions in the questionnaire required straightforward frequency counts. The computer programmes available at the Stirling University Computer Unit could adequately compute frequencies. The simplest programme was the Statgraphics package, which could work on a personal computer with a 20mb hard disk. The major limitation with Statgraphics was that it worked with a maximum of about sixty variables; whereas the questionnaire used had 118 variables. Even though Statgraphics was the simplest to use, it was clearly inadequate for this study.

The next software considered was Minitab, which runs on the University Vax. Minitab could handle all the variables contained

in the questionnaire, as well as compute several sophisticated statistics, including regression analysis, but it was not as powerful as required . As one of the issues of this study was to find out the relationships between and among several variables, using bivariate and multivariate techniques, Minitab was found unsuitable as it could not cope with the cross tabulations procedure.

The Statistical Package for Social Sciences extended (SPSSX) was the only software which was found to do everything required to test the hypotheses and research questions, which needed cross tabulation procedures. The only limitation with SPSSX, was that it was difficult to learn and that a complete programme had to be written in the SPSSX language, by the investigator. At Stirling University, to write SPSSX commands, one needs to use the VECCE editor which has to be learned separately. Over a period of about twelve months, enough courses had been attended by the author, to enable him to use the programme.

Programme design.

There are four basic structures of the programme:
- Data file — 'DISTEDU.UNI'
- Variable list and value labels file — 'DISSYS.SPX'
- The system file — 'DISTEDU.SYS'
- Procedure files : 'DISFREQC.CVR'; 'COST.STD'; CROSSTAB.SEX
  PEARSON.COR; TABULATE.CRS; MATRIX.COR; etc.

The data from the questionnaires had to be broken down into variable codes, in standard 80 column computer programming coding

sheets.

As the questionnaire had been primarily designed to be student centred, rather than computer centred, each question was coded after the questionnaires were returned. 118 variables were produced. Each case occupied four lines. In all, 27 coding sheets were used. These data was typed into the Vax with the assistance of the Computer Unit. A file containing this basic data was opened and it was called 'DISTEDU.UNI'.

'DISSYS.SPX' contained the SPSSX commands which were variable names and the columns each occupied in the basic data file. Value labels were also specified in this file. DISSYS.SPX could also do a dummy run to check if data were as specified and ten cases were listed at the end of the run for checking. The command, "/Format = condense ", was very useful because it made it possible to run the results quickly in order to check mistakes.

When everything was running smoothly and all the mistakes had been corrected, the command "/Format = condense", was removed and replaced by the command:

"Save outfile = DISSYS"

This command created the system file, 'DISTEDU.SYS', which could be used with any of the procedure files without repeating the variable names and value labels each time.

The procedure files were created for each specific task: frequencies, crosstabulations, correlations and significance testing, etc. For example, DISFREQC.CVR, computed the category

frequencies (interval values) while 'COST.STD', computed the quantity variables, (ordinal values) such as students' geographical distance from the university, cost and so on. Results for procedures were produced very quickly on request and printed in the Central Computer Unit's printer. Data analysis was therefore conducted very quickly using different programmes.

## Students' social background and their geographical distribution

Part-time students come from all parts of Zimbabwe. The majority of the students, (38%) live in the city of Harare. In Matabeleland North there are 19.6 % and the Midlands has 17.7% students. These provinces which have the second and third largest towns respectively in Zimbabwe, have a higher than average number of part-time students, for rural communities.

One indicator that most of the students live in towns, is the fact that 88.6% of them indicated that they had electricity at home. The majority of rural homes have not yet got electricity in Zimbabwe. While 82.9% of the students indicated that the question on the availability of batteries was inapplicable to them. But the problem seems very acute for those students living in rural areas. One student indicated that he could neither get batteries nor candles in his area.

Studying at a distance or by part-time is of course affected by many other factors related to the students and their way of life these include:

- whether the student is married or not.
- the number of children in the family.

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Fig.9.3a Geographical distribution of part-time students at the UZ.



Mat.S- Matabeleland South
Mat.N- Matabeleland North
Mid/Mas- Midlands & Masvingo
Mas.E- Mashonaland East
Mas.W- Mashonaland West
Mas.C- Mashonaland Central
Manic- Manicaland
Har.- City of Harare
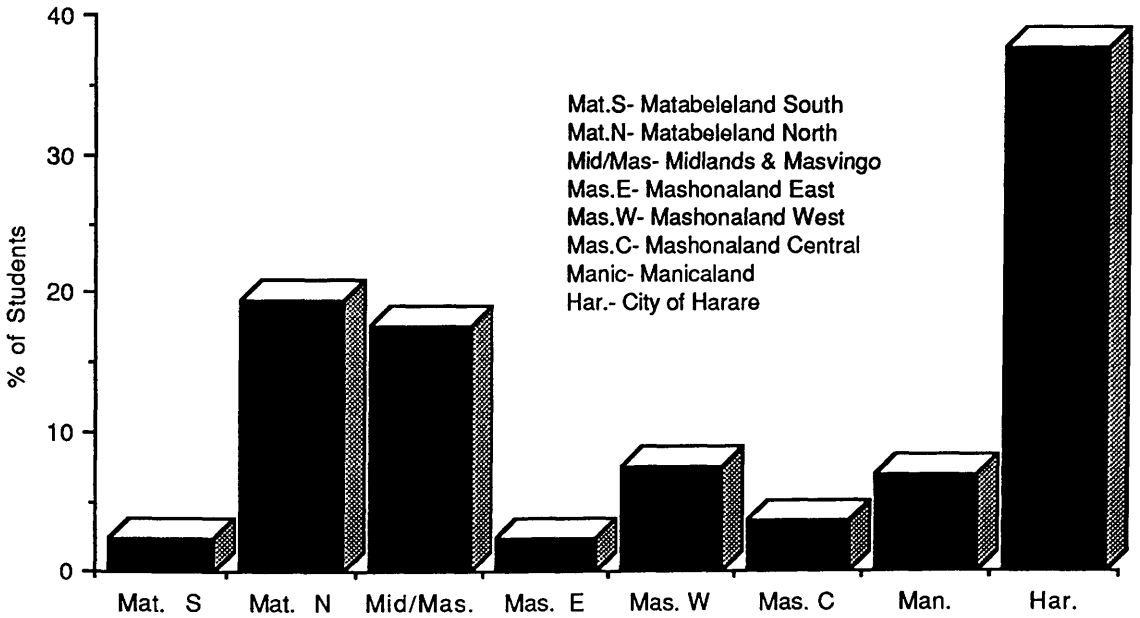
Fig. 9.3b Map of Zimbabwe showing districts .

. quality of study space available at home.

. student's time geography. (eg. activity scheduling)

. socio-economic status as reflected by the students occupation, previous qualifications etc.

It seems to be a general pattern that most distance education students are married and have children. 63.3 % (100) students were married of whom 25% (25) were women. Of the 55 single students, 56.4% were male and 43.6% were women. Only one student was either divorced or separated and there was one missing value.

The mean number of children students had was 2 and the range was 9. The expense of maintaining school age children was thought to have an impact on the costs of students. It turned out that the mean age of children was 4.1 years, with only one student with children in their twenties. Young children can also be a burden because of the need to be close to their parents, particularly at this age. One young woman living outside Harare had to take her two young children with her, including a maid to residential periods at the university. This added an extra Z$300.00 to her study expenses, as the university does not run a nursery for students. This indicates that most of the students are young and are working towards promotion or salary improvement as is shown in figure 9.4. There was a negative correlation of -0.47% between marital status and the number of children, which was very significant, at p=.000. This means that the more children a married student has, the less likely he/she will study part-time.

Fig. 9.4  Reasons for studying



10.92%    3.24%

15.37%

38.42%

17.29%

14.76%

Employment
Promotion
Change Career
Increase Salary
Interest
Other
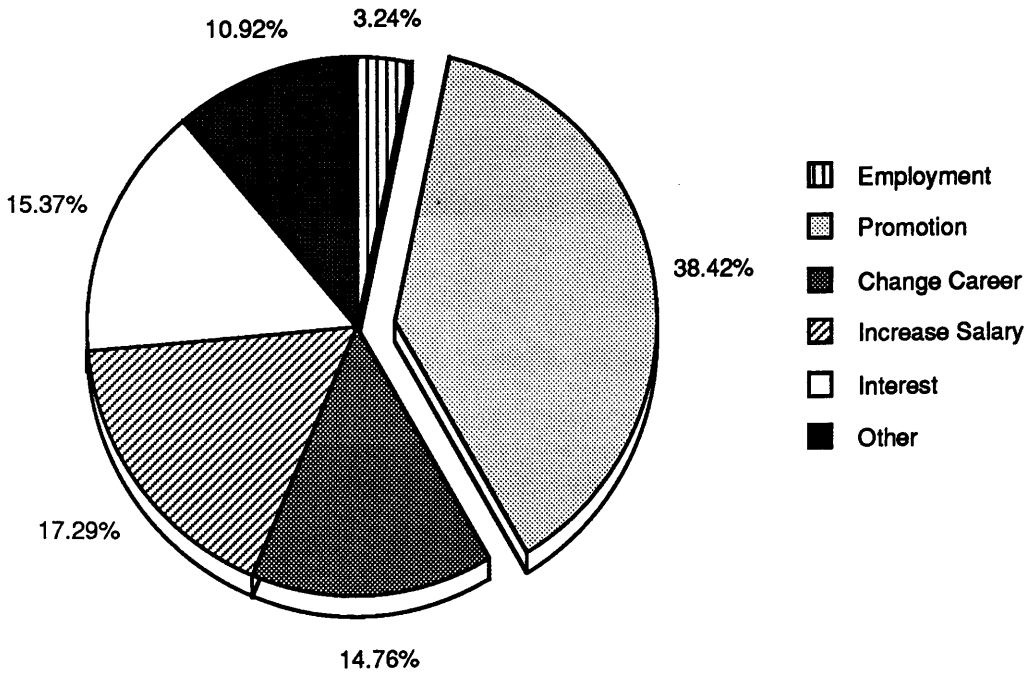
Fig. 9.5 Factors which cause drop out



6.4%

19.6%          25.3%

2.5%

10.8%

35.4%

Family Matters
Finance
Difficult Subject
Lack of Feedback
Other
Missing
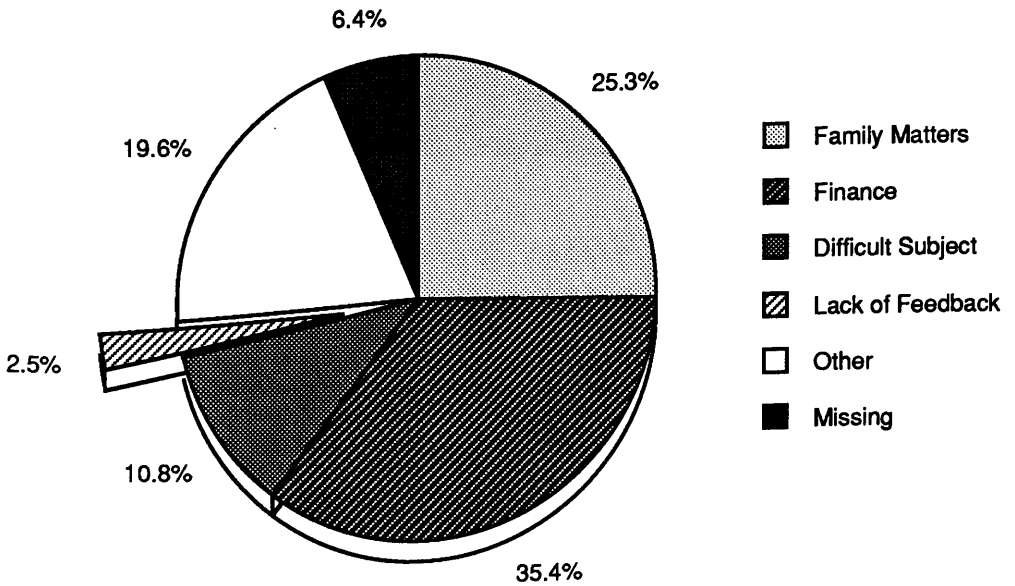
The family seems to play a major role as a motivating factor for many students. 31% (48) of the students said that they had help at home with their studies, of these 43.8% (21) were women. Many women stated that they had help from their husbands, but none of the males (27) stated the source of their help at home, even though they indicated that they received help . It could well have been from other relatives but some of the help men received may have come from wives.

Dropout: Students were also asked about which factor was most likely to force them to drop out from their course; 25.3% of all UZ students felt that their family was the most important factor, second only to finance. Not surprising, was the fact that 25% of OU students who filled in the pilot questionnaire, said the family would be an important factor. Another striking match between UZ and OU students. (see figure 9.5 and appendix L)

The students' time geography is determined by their occupation and socio-economic status. Because of Zimbabwe's history discussed in chapters two and eight, socio-economic status is tied to education and occupation for many people in Zimbabwe. Education and high qualifications seem to be one way to justify one's position, even in politics and public life.

The majority of students 58.9% are teachers. What was surprising is that the next highest group of students were people in senior management posts,(14.6%). These included company directors, regional managers, divisional managers, etc. in both public and private institutions. Many of these students were doing the MBA

degree and other business courses. This included a qualified Chemist who was planning to start his own company.

Students in middle management and supervisory posts included sales managers, education officers, training officers and managers, doctors, nursing administrators and so on. The majority of these, were following adult education and public health courses. If teachers are to be excluded, there were only 4 (2.6%) students who could be classified as non professional workers.

Inevitably one wants to know why these people are studying. Figure 9.4 as we have seen, best summarises the reasons. It is of some significance that 38.42% of students are studying for promotion and 17.29 % to increase salary. One explanation of this state of affairs is that many posts became vacant at independence in 1980, and these were filled by people who had high academic qualifications but with little or no practical relevant experience. For a variety of reasons, many of these posts did not carry with them the actual responsibilities. Many people in management are studying now, it seems, in order to gain promotion to a higher status, which may not always mean a change in pay, but in power and authority, which many blacks still do not possess particularly in the private sector. Teachers, nurses and non professional employees, wanted to increase their salaries. Many of these earn an average of about Z$7,200 per annum. The cost of living is very high, and many workers earning at this level or below, who form the majority , are in need of higher pay just to make ends meet. A higher qualification is perceived as the solution. It is important to note that only 5 (3.6%) are

studying to get a job, whereas in the OU sample, 18.75% were studying to get a job. There is more financial support for OU students from local authorities for their studies than UZ students. Another explanation for very few unemployed students, would be that OU courses are more accessible to ordinary people than is the case at UZ, even though many British people may disagree. This point will be picked up again when we discuss costs of studying.

Time geography: Because many people in the professions discussed above, except nurses and doctors, work fixed hours, many go to work and come back at fixed times as shown in figures 9.6 and 9.7

A regular pattern of life is conducive to distance education, especially if it is heavily dependent on frequent face-to-face sessions. In a study referred to above, McIntosh, 1980, found out that one of the main reasons given by students for dropping out of OU courses was lack of time. McIntosh points out, that more often than not, lack of time was just an excuse rather than the real reason for dropout. That may be true because, in this study, no correlation between major reasons for dropping out, (0.03) and total study time available per week, (p= .35). This issue will be discussed further on the section of student support.

The courses.

Programmes offered to part-time students reflect the sideline nature of distance education provision at the University of Zimbabwe. Faculties and departments offer places to part-time students as and when they see fit; with the exception of MBA,

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Fig. 9.7b UZ students' average study time per day.
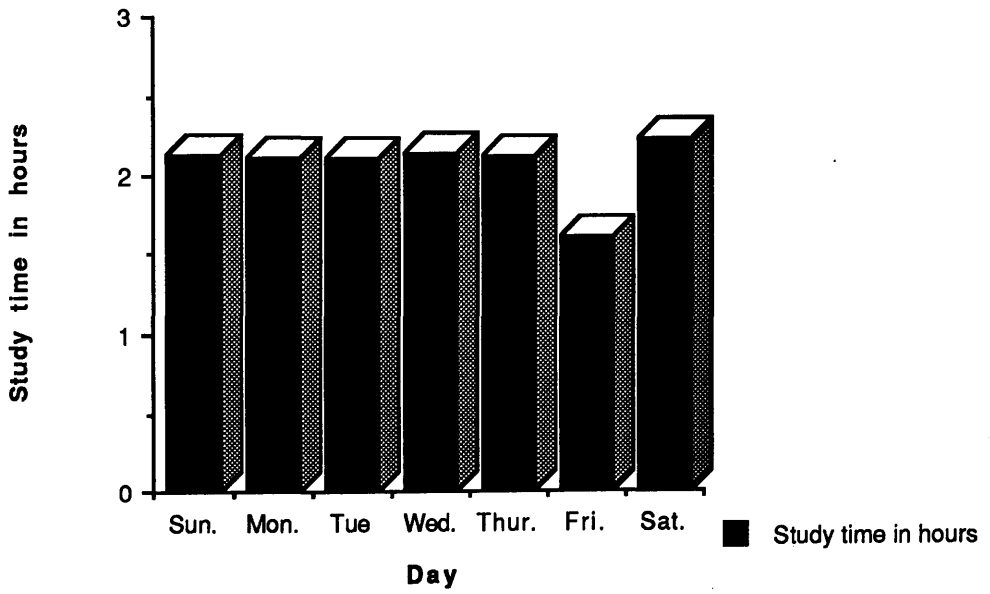


Fig. 7c Average study time for Open University students in the pilot study.
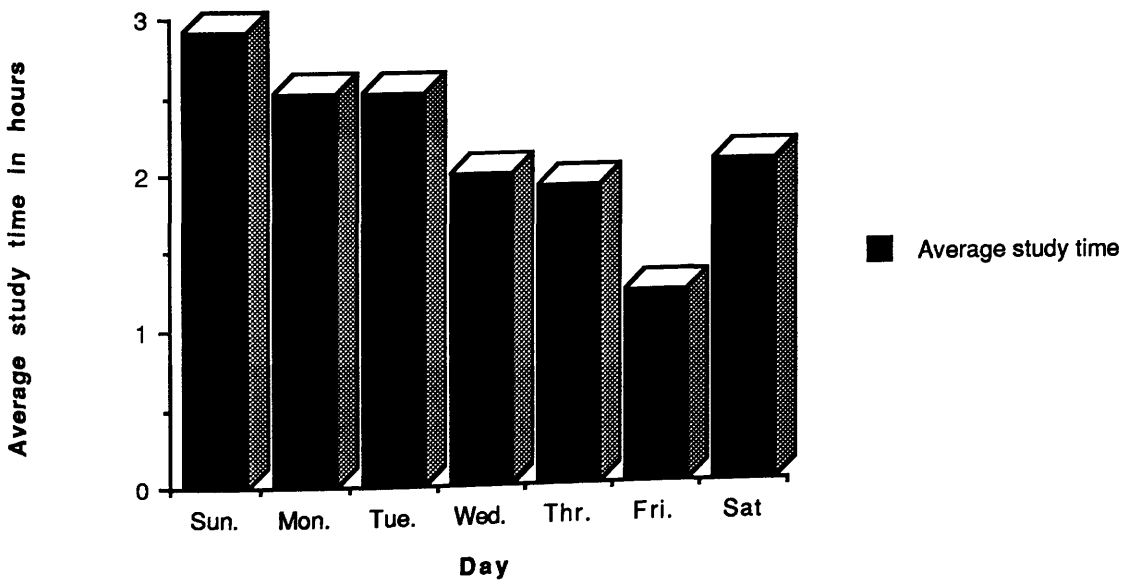
Grad.C.E. and some B.Ed/ADEd and Business studies courses which are specifically designed for part-time students. B.Ed courses leading to science, maths and practical subjects, like home economics and metal work qualifications , are available to full time students only. The full-time B.Ed programme runs for one academic year. There are however a very few part-time students at postgraduate level right across the faculties. The irony is that the M.Ed degree is only available for full-time students, or those who live around Harare and can therefore attend face-to-face instruction in the evenings. Yet M.Ed students are very mature and experienced educators and government officials who are obviously capable of studying independently.

<u>Master of Business Administration</u>: Duration of courses and programmes varies across departments and faculties so much that, it is difficult to generalise. The full-time MBA programme for example, takes fifteen months and twenty six months part-time, including a minor dissertation of about 20,000 words. In part one, which forms the first year of the programme, students have to do seven courses. These courses are:

- MBA 501   Accounting
- MBA 502   Introduction to finance
- MBA 503   Marketing
- MBA 504   Business and its environment
- MBA 505   Statistics and operations research
- MBA 506   Management and Organisational Behaviour
- MBA 507   Managerial Economics

The courses are basically designed for full-time students, but

they are also offered to part-time students. The programme seems very heavy for most students. Most of the students study for between 20 hours - 27 hours a week; which is sometimes more than double the mean weekly study time for all students of about 14.89 hours per week. Students have to attend two week blocks of face to-face instruction per term. (The official UZ prospectus only refers to two-week blocks as and when the department sees fit) In the second part students have to complete ten courses, plus a dissertation.

The Bachelor of Education: The B.Ed part-time programme is primarily run for qualified teachers who wish to upgrade themselves for promotion and salary advancement purposes; or there are those wanting just to improve their qualifications. Part I is of one year duration and students study three courses including curriculum theory which is compulsory. Part II, is of two years duration . There are also two-week blocks of face-to-face contact every term except for the final term, where students have to attend full-time for the whole term. On average, students spend about 42 days a year on face-to-face contact and yet on some courses, students are required to attend almost every evening; resulting in a maximum of 210 days spent on face-to-face contact.

It had been hypothesised that students would prefer shorter residential periods, but on the contrary students generally prefer longer residential periods. 56.3% of the students wanted the period of face-to-face increased. This was also true with OU Students, who have only one week of residential study per annum.

Diploma and degree courses in Business studies, Nursing and adult education are also offered . Courses in adult education have always been offered to part-time students including the M.Ed in adult education. Those departments which have some form of structure for part-time students, seem to require them to attend for face-to-face sessions every term. There are however a few departments where the student's programme is only known by their supervisors or instructors. In this limited study, it was not possible to investigate all issues concerning courses, perhaps another researcher may extend our knowledge about this critical issue. Of particular concern to this researcher was how women fared in the various programmes, a cross tabulation is shown below.

## Table 9.2.

### Courses by sex

| Course | Male | Female |
|---|---|---|
| B.Ed | 19 | 18 |
| MBA | 11 | 0 |
| Business Studies | 10 | 2 |
| Adult Education | 21 | 9 |
| Medicine/Public Health | 6 | 3 |
| Grad.C.E | 26 | 16 |
| Other courses | 13 | 3 |
| | 106 | 51 * |

* One missing

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Women are under-represented in all programmes except in the B.Ed programme where they form 48.6% of 37 students. It can be seen that there are virtually no women in the MBA programme and very few 16.7% in the other Business courses. A further analysis done by sex and subjects, revealed that women are only well represented in language courses and education . They actually are in the majority in Shona (55.6%). The trend seems to be that more and more women educated to degree level find that they can only find employment in the teaching and nursing professions, while men are moving into the business fields. Since the Graduate Certificate in Education is now a part-time course due to acute graduate teacher shortage, this explains why many women are doing education courses.

## STUDENT SUPPORT.

It is difficult to draw a line between actual instruction and student support activities. Many distance education institutions take student support as an integral part of their teaching activity. But as Northcott and Shapcott (1986) discovered in Australia, there are so many varieties and philosophies of student support even in one country like Australia, that it is difficult to generalise. Northcott and Shapcott, prefer to tackle the question of student support from the 'student needs' perspective. They view support as:

> The attempts made by educational institutions to meet the perceived needs of their students and prospective students.
>
> Northcott and Shapcott, (1986 p. 5)

These needs may come at every stage of the student's association

with the institution concerned; right from the initial decision to register until the student eventually completes the course or withdraws. Distance educators are very concerned with students who drop out prematurely from their courses, and therefore much effort is placed on giving students support. The British OU uses a network of regional and local centres staffed by counsellors and tutors to cope with the problem of student support and dropout. Various media are also to keep in touch with students so that problems are spotted early. In India, Canada and many other countries, satellites and mobile centres have been used to enhance student support. (see Salter, 1982, Mugridge and Kaufman, 1986 and Bates, 1987).

This study focused only on a small aspect of student support, after registration :

- tutor support.
- students' use of the media in general and for their studies.
- books libraries and the availability of study materials.
- suitability of existing communications infrastructure

## Tutor support.

The University of Zimbabwe has no problems in attracting potential students. Some departments have more applicants than they can handle. In 1987, the B.Ed course had over 5,000 applicants for less than 100 places. This pressure of places is felt even for full-time students, Matshazi et al, 1986.

Student-tutor contact for part-time students is confined to

residential periods only. These sessions are in the main once a term ( every four months) and vary in length, from 30 days to 210 days a year. Contact time is calculated in terms of the number of contact hours, which is 60 hours per half course and 120 hours for a full course. These face-to-face sessions form the key element of instruction, and most students value these sessions as the table below shows.

Table 9.4

```
------------------------------------
 Value of face-to-face sessions
------------------------------------
    Very useful        65.2%
    Useful             30.4%
    Not useful          0.6%
    Missing value       3.8%
```

Students receive very few study materials from the University. Individual departments sometimes produce readings for students or photocopies of notes. Otherwise students rely on books and face-to-face instruction for their lessons. The assignment seems to be the main method of learning when students are not at the university. Some students nevertheless perceive assignments as part of the exam more than anything else. One student, commenting at length on the issue, says:

> When tutors say that course assessment and exam results are to be combined to give a final mark they should be lenient with students who submit essays later than the due date. Tutors must bear in mind that as part-time students we have responsibilities at our places of work and sometimes it is very difficult, at times to strike a compromise between your part-time course and your job demands, so if a student is late in submitting an assignment and writes a letter of apology or explaining the circumstances that led him to write the assignment late he should not be given a zero (sic) but mark what he has produced rather than not grading his assignment at all.

The student concerned raised issues which formed a central theme of most students' answers. The student obviously has problems with timing and time scheduling and possibly is not aware of the need to keep deadlines in distance education. McIntosh and Woodley, 1980, report that the main purpose of the local counsellor is to give students encouragement, particularly when they have difficulties with their studies. Clearly UZ students do not have this support. Some comments reflect on frosty relations between some students and tutors. One said:

> Lecturers' marking is not always fair and at times they set vague qus (sic) they cannot answer. Sometimes you get a lecturer who has a hazy idea of what he has to do.

McIntosh et al, again warn that students with difficulties or with low motivation tend to look for scapegoats, but important insights can be gained from such statements as the one above. One would find it difficult to know whether the next comment was given as a "scapegoat" excuse or not. The student was talking about too many free periods while on residential study and lecturers missing some of those few periods: He observes that;

> Lecturers dodging lectures or missing lectures regularly within this short period make it difficult for us.

Another student who may need to know the value of seminar lessons says:

> Some lecturers are not fully commited (sic) to their work. They simply assign work to students who later deliver lectures and then a few comments are made in conclusion. At times they miss lectures entirely.

Some of the issues raised above are important enough to warrant attention from both lecturers and students. Firstly, students should be told or made aware of what to expect from the course,

there is clearly lack of communication. Secondly, lecturers must be responsive to students' needs and be trained in this mode of teaching. Figure 9.9 may sum up the argument about the level of help they give students during difficulties. Students were asked what they do when they face difficulties with their studies, only 19% said that they contacted their tutor. This is not surprising because when students were asked whether they had a personal tutor or not; most said that they did not or did not know whether they had one.

Table 9.5

```
-------------------------------------------
       Do you have a personal tutor?
-------------------------------------------
          Yes    =    24.1%
           No    =    63.3%
 Do not know     =    10.1%
    Other        =     0.6%
```

Total number of respondents = 157

It was therefore not unexpected to find out that even though there was a low negative correlation (-0.14) between action taken during a problem (Question 25) and that taken during a major crisis which may lead to dropout (Question 48) the result is however very significant, (p=.04). This means that the absence or presence of a personal tutor would help the students. Figure 9.9 confirms this finding, as it shows that at the moment, only 7% of the students contact their tutor if they have problems. It was also surprising that tutor feedback is perceived as unimportant or not possible in certain cases, as only 2.5% of the students said that they would drop out due to lack of tutor feedback.

Fig. 9.8 Perceived main problems.

6.12%  12.91%
5.83%
6.80%

16.02%                    25.24%

7.38%            19.71%

- ■ Self Discipline
- ▨ Financial Problems
- ▨ Planning time
- ▨ Motivation
- □ Lack of Books
- ■ Accommodation
- ☰ Fees
- ▨ Other
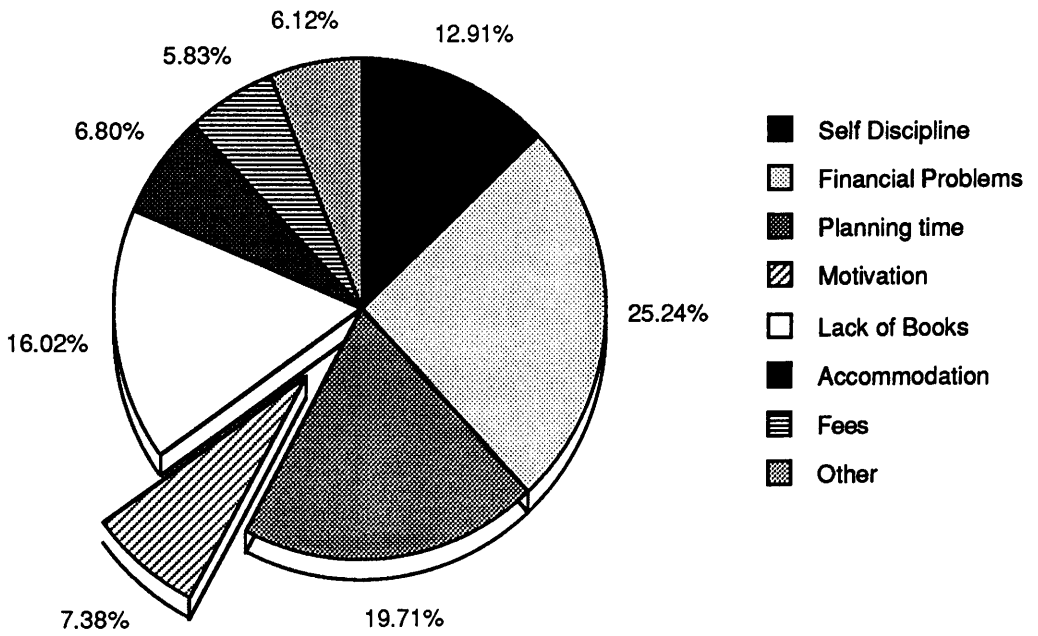
Fig. 9.9 Source of motivation during difficulties.

15.79%
21.05%

15.79%

10.53%

10.53%      26.32%

- ■ colleagues
- ▥ Temp. suspend study
- ☰ Telephone tutor
- ▨ Family
- □ other
- ■ not apply
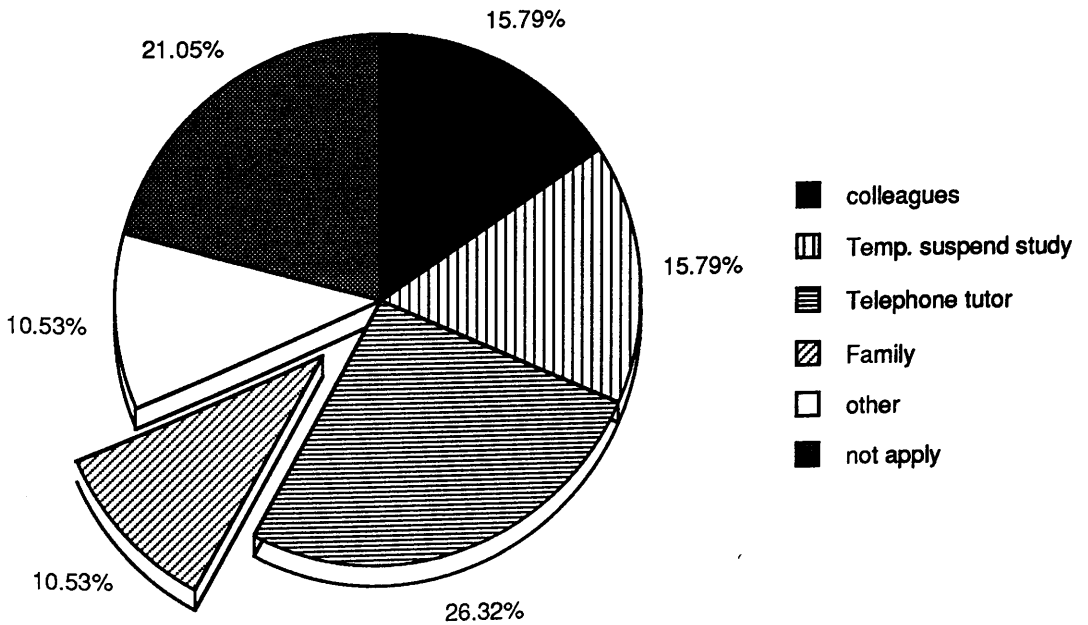
It may be possible that students' perception of face-to-face contact is determined by how they perceive its purpose. In reply to question 31, which was on the purpose of residential study, students' replies were as follows.

Table 9.6

```
---------------------------------------------------------
           Purpose of residential study periods
---------------------------------------------------------
a) Learn new ideas            =  54.4%    (44%)*
b) Meet other students        =   5.1%    (75%)
c) Clarify what you have read  =  20.3%    (69%)
d) Other reasons              =   9.5%    (19%)
   Missing                    =  10.8%      -

   Valid  responses = 141
```

(* Responses from OU students in the pilot study are in brackets)

It seems therefore reasonable to conclude that students expect to be taught new material during their residential period. If that is not the case, many may feel that they have been let down, as we saw above. It is interesting to compare what the pilot study OU students said, and the UZ students' responses. There is a marked difference in the perception of the purpose of residential study.

Also significant is that a majority of students, (89.2%) prefer both assignments and a formal exam for their final assessment. Perhaps the complaints about assignments above, show the importance attached to them by students.

Because all student support (where there is any) is centralised, as there are no study centres, other methods of tutor/student support may be used. It was noted above that some students receive help at home. But when specifically asked (question 32)

if they had someone to help them with their work at home or at work, 67.7% said that they had no help at all and only 30.4% indicated that they had any assistance. There was positive response to the idea of a study centre as table 9.7 shows.

Table 9.7

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Attitude to the role of study centre

---

Very useful     -     61.4%
Useful          -     25.9%
Not useful      -      8.9%

The reasons cited for the use of a local study centre were varied; 12% of the students said that they would use it for study purposes; 31% were going to use a mobile centre for discussions with a tutor as well as for study and 20.9% were going to take the opportunity to meet other students. Since married women in Zimbabwe are not as free as men to go out, particularly in the evening, it was considered useful to analyse the potential use of a local study centre by sex.

Table 9.8

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Use of local study centre by sex

---

|                    | Male % | Female % |
|--------------------|--------|----------|
| To study           | 14.2   | 7.7      |
| Study /discussions | 29.2   | 34.6     |
| Exchange books     | 5.7    | 15.4     |
| Other              | 12.3   | 3.8      |

Even though 15 males and 12 females did not reply to this question, it was particularly encouraging to see that a majority of women were willing to use the study centre for study and discussions with a tutor or other students. Traditions may be slowly changing. But what students say they would do and what

they actually do is different. As McIntosh et al, 1980 found out: students do not use study centres even if they take comfort in the knowledge that they are available when they want them. Study centres are expensive to operate, particularly if the student population is small as is the case at UZ. It was therefore decided to probe students on the use of a mobile study centre. Many respondents did not answer the question (28.5%) others said that they did not know, (1.3%) perhaps because they did not know anything about a mobile centre. What was interesting though is that more women than men said they would use it. This point will be discussed further in the section on libraries, as more women than men find problems in using libraries. One pressing question was whether tutor support could be extended by using the media, as it is currently lacking or non-existent. It is to that issue that we must now turn.

## STUDENTS' USE OF THE MASS MEDIA.

The media play an important part in everyone's life and will continue to affect and change how people learn. Schramm, (1977) correctly points out that the division between 'media' for general use and entertainment and that for education is too simplistic and unreal. Those seeking to understand the use and potential use of media by distance education cannot do so outside the social parameters of the students' lives, because their learning takes place in one linear time geography. With this awareness, this section attempted to raise general and specific issues which have a bearing on the students' use of mass media. There were several findings including a major and significant

finding of this study:

- student time geography determines the amount of time spent watching television and listening to the radio.

- access to various media precludes many students in developing countries from using it.

- quality of reception and programmes may encourage or discourage use of the mass media.

- Students' perception of what is useful media for their studies is a critical factor as to which media are used and which are perceived as effective.

Students' time schedule was discussed above in relation to occupation. It seems possible that the way students schedule their time determines what programmes they watch on TV and listen to on the radio. On average, most part-time students at UZ are away from home for almost 10 hours a day during the week, in addition, they also spend about two hours studying each day except on Friday when they spend on average about one and half hours studying. It seems as if it is a general pattern that Friday is regarded as a relaxing day by most students. This life pattern effectively leaves about twelve hours of their day free for sleep, relaxation and entertainment. (see fig. 9.7b)

Students' access to various media.

Access to basic media, books and radio by part-time students at the UZ is as good as can be expected under conditions of foreign currency shortages. Figure 9.10 shows that 95.6% of the students have easy access to radio and 89.9% to all essential books. The percentage for books should of course be 100%. It is lower than

Fig. 9.10 Students' access to selected media.

R... Radio
TV... Television
ACR... Audio cassette recorder
TW... Typewriter
VCR... Video cassette recorder
C... Computer
B... Books

Number of students
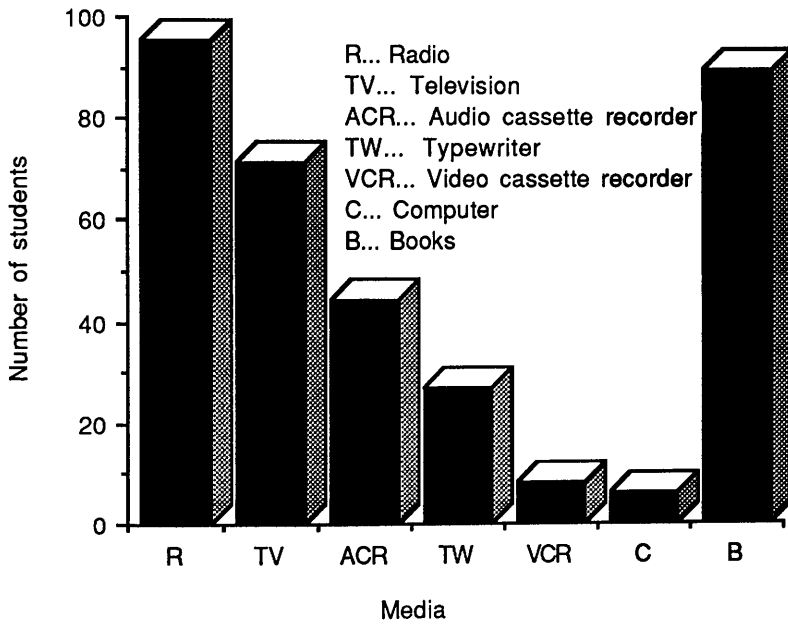
Media

Fig. 9.11 Media currently used.

R - Radio
TV- Television
TW- Typewriter
C- Computer
B- Books
Ot- Other

Percentage of students

☐ Students

Media
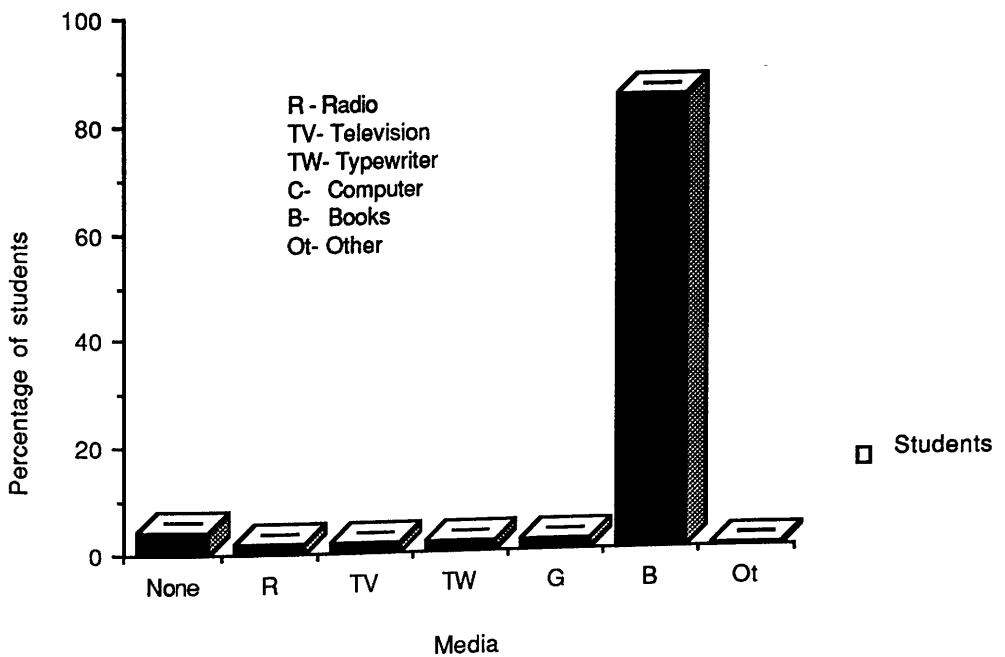
that because the students felt that the question implied 'access' to all the books required for study. Many students complained bitterly about the shortage of essential books, as will be discussed under the section on libraries.

Many more students than was expected had easy access to television, 71.5 %. This may be an indication that the majority of students live in towns or places with electricity. It may also show the elitist nature of the part-time programme, as the majority of the people of Zimbabwe live in rural areas.

Rather worrying, was the fact that only 44.3% of the students had audio tape recorders. Audio cassettes are perceived by Bates, (1980) as being cheaper and more useful than open circuit broadcasting. In many developing countries audio cassettes are very expensive indeed. While in the UK an audio cassette costs about 60p (Z$1.90), in Zimbabwe the same tape costs about Z$ 16.00 (£4.50) if, that is, if is available at all.

Cassette recorders or radios with cassette players are even more scarce and expensive. An average machine which costs about £35.00 in the UK, costs about Z$1,000 ($333,00). Many students cannot afford them.

Students' access to video recorders (8.2%) Computers (6.3%) and typewriters (27.2%) make these media almost out of reach to most learners, that is to all but those who can gain access to them at work. For all practical purposes, books, radio and television are worth investigating further in terms of their availability to students. Figure 9.10 clearly shows the redundancy of other media

as compared to books. When asked about the media they are currently using for their studies, the dominant media used are books. Other media are used by no more than 1.9% of the students.

It did not come as a great surprise, that students found books to be the most useful media for their studies, 87.3%. The relationship between media currently used (books) and that which was perceived as most effective for study produced the most significant result of this study. It showed that correlation between the two was 0.81. The result was highly significant at p=.000. This finding has significant implications for policy issues on media to be used for part-time students. The fact that students' perception of which media are useful, determines the media they use for their studies and will form an important part of the discussion in chapter ten. We shall turn our attention for the moment to broadcast media which have potential of being used much more than they are at the moment.

## Quality of broadcast reception.

It has now become vital to ask how often the students listen to radio and watch TV and for what purpose. As stated above, it came as a surprise to learn that 71.5% of the students had easy access to television and 95.6% had radios. Zimbabwe has two television channels and four radio stations. TV2 and Radio 4 specialise in educational programmes. Both television and radio reception was found to be generally good in all the regions, except TV2 which is only available in Harare. At the time of writing, plans were being finalised to extend the TV2 coverage to Bulawayo. Radio 4 appears to be either very poor in many rural areas or it is not

well publicised to students. About 36% did not know that this channel existed.

Television: The majority of students watch television at least three to four days a week. 29% of them watch TV every day; only 11.4% of the students do not watch television at all. Those listening to radio everyday make up about 51.6% of the students. Only 3.8 % never listened to radio. This finding is consistent with that by McIntosh et al, (1976) who discovered that 52% of students listened to radio everyday. It is not clear whether some of the students listened to the radio in their cars while travelling to and from work or at work.

It was also interesting to find out a little more about what type of programmes students watched or listened to. Table 11 shows the percentages.

Table 9.9

---
Programmes UZ students like on TV and radio.
---

| | Television | | Radio | |
|---|---|---|---|---|
| News | 74.1% | (62.5%)* | 63.3% | (25%) |
| Music | 44.3% | (31%) | 77.2% | (62.5%) |
| Sports | 53.2% | (13%) | 23.4% | ( 0.06%) |
| Drama | 34.8% | (31%) | 20.9% | ( 13%) |
| Films | 43% | (62.5%) | ----- | — |
| Other | 12% | (25%) | 5.7% | (31%) |

* Figures in brackets are for the OU students in pilot study.

Similarities and differences can be clearly seen. Both groups of students listen to TV news. But fewer OU students listen to news on the radio. The explanation is of course that all the OU

students have TV while many UZ did not have access to television. Fewer UZ students watch films on TV than OU students, perhaps because of the poor quality and irrelevance of TV pogrammes in Zimbabwe. An example of TV programmes appearing in The Sunday News (a Bulawayo based Sunday paper) on the 16th of August, 1988, a week before the students filled in the questionnaire is given in appendix J. Evening entertainment on that day were, "Dynasty and Cagney and Lacey" . Television consists mainly of American and British films, which many students may perceive as irrelevant. There are no educational films specifically broadcast for tertiary level students. Radio attempts to broadcast one teachers' programme one afternoon a week. Obviously, students' perception of popular TV may affect their perception of educational television. On the other hand a low percentage of those UZ students who watch films may indicate that they will be studying at that time.

## Potential use of open circuit broadcast programmes.

Matshazi et al. (1986) dismiss the use of open circuit broadcasting for university level distance education courses, Particularly TV, as very expensive. Bates, (1982 and 1987) also warns strongly that there is a move by distance education institutions away from open circuit broadcasting , to recorded lessons. In developing countries this trend may have not taken off at all.

In Zimbabwe, there is currently one television channel TV2 and one Radio station (Radio 4) which are offering a 'free' service to educational institutions. At the time of writing, there is

still a great dearth of suitable material. There is no reason why the University cannot make use of this facility at the moment, as it will cost them nothing in transmission costs.

Bates, (1987) puts the minimum figure for a viable open broadcast for radio at about 5,000 students, he says that it will be more expensive to broadcast to fewer students than sending out recorded tapes. Even that figure refers only to overall figures because none of the OU courses has that many students per year.

Anxieties about the costs of broadcasts is minimal when compared to the real problem, as to whether these broadcasts are actually useful to students in achieving their objectives. Distance education students are in the main able to decide whether they want to use broadcasts or not; and we have seen that they are not willing to do so, unless they perceive broadcasts as useful. Accordingly, students were asked if they could use broadcasts and what format they preferred: live, recorded, both live and recorded, or none at all. Only 19% preferred live broadcasts, as compared to 24.1% and 51.3% who preferred recorded and/or both respectively. It was with some relief that it was discovered that only 2.5% would not use such programmes at all. Having committed themselves, students were then asked about specific issues:

- convenient days and times for live broadcasts.
- Radio station;
- TV channel preferred; etc.

Asked about convenient days for TV lessons, four days stood out , but it is difficult to give a special day:

Table 9.10

```
------------------------------------------------
   Preferred day for TV and radio lessons.
------------------------------------------------

Day                    TV              Radio

Monday                12.00 %          7%
Tuesday                7.20 %          3.2%
Wednesday             10.4  %          8.2%
Thursday               3.2  %          6.3%
Friday                 5.6  %          3.2%
Saturday              18.4  %         22.8%
Sunday                34.4  %         24.1%
```

Clearly then, if any live broadcasts are contemplated by the University for distance education students, they should be transmitted during the weekend and in the evening. 56% of the students preferred the evening for TV lessons and 41.8% for radio. Radio 3 was the station most preferred by students, (33.1%). The main reason for this preference may indicate the quality of the radio station itself and the quality of FM reception. It is suggested that, initially, programmes could be transmitted on various channels in order to attract audiences, and then phase them on to one channel gradually.

The figures in table 9.10 confirm what is generally known now that very few students will use live broadcasts. The nature of distance education students make it difficult for them to stick to a rigid timetable. On the issue of live broadcasts the author asked a colleague working in a department concerned with research in a distance education university why they were still using live broadcasts when their own research showed that a large proportion of their students never used them. He pointed out that there were many factors to be considered:

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- contracts with a broadcasting house had to be fulfilled.

- people's jobs and therefore their livelihood, were at stake;

- broadcasts serve an important function in publicising the institution and its activities.

- Some broadcasts are actually effective and useful in sending out urgent information.[3]

Publicity is a very sophisticated and expensive aspect of any organised activity nowadays. So if an institution can reach those few students through broadcasting while on the other hand publicising itself, they may be an effective use. Open circuit broadcasting will have an increasing role in distance education. The alliance between Channel Four and The Open College in the United Kingdom may be an example of things elsewhere.

In Zimbabwe and other less industrialised countries, constraints on the widespread use of recorded lessons seem to be economic. But whenever possible, for effective use, recorded lessons give the learner that psychological security of control:

- of the time of viewing.

- pace of viewing, as the tape can be stopped as and when required.

- selection of what is important, as the student has to take a conscious decision of what to watch or listen to.

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[3] McIntosh, et al's (1976) research on the OU's first intake would have been a total disaster if it had not been for the programme 'Open Forum' which is broadcast occasionally on TV and on Radio by the OU; because of the postal strike which began on the 15th of January to March, 1971. The programme was useful in keeping students informed, on what they should do with the questionnaires they had received before the strike.

Overall, both open circuit broadcasts and recordings, are useful in giving distance students support, as programmes they are simple and used in conjunction with other student support strategies, like libraries. Some educational programmes have been criticised for being like ordinary television or being too artistic; making it difficult for many students to understand them. It is vital for each distance education institution to experiment, in the light of students' cultural background with various production techniques.

Books and libraries.

Part-time students at UZ rely on books for their studies. But books are scarce, which led one MBA student to comment that:

> Books need to be more easily available in Zimbabwe and at a reduced (reasonable cost).

Another student suggested that it was:

> Quite important if some of the books which are very important could be photocopied and posted to students. Also some important notes should be typed and handed out to students because its really difficult to sit down and study when you know the books are not the important ones. Thank you.

It is also interesting to note that many students (16.02%) cited lack of books as the second main problem they were facing. (see figure 9.9 ) One student pointed out that without adequate books, " The assignments I write are from my own head and very poor". Only 11.4% of students managed to get all the books prescribed for their courses; 78% managed to get a few and most worrying was the fact that 8.9% of the students, all from rural areas, did not get any specifically prescribed books at all. One student proposed a solution:

There should be a special textbook to be used for each
course, and see to it that its obtainable with (sic) fair
price. Otherwise the best thing is that the material should
be almost enough on its own.

Evidence from the OU students shows that if essential course
material is supplied in study units, students have fewer problems
with study materials. For example, 81% of OU students in the
pilot study indicated that they had received all the materials
they needed for their course from the OU. All the students had
easy access to a library, but most found that their local
libraries were not very useful, as they did not stock the books
they needed.

## Use of libraries.

Even though almost all the students used the University library ,
(93.7%) only 22.2% of the students got most of their books from
the University library. Those students who got most of their
books from bookshops comprised 31%, which was the same percentage
as those getting books from public libraries, especially from the
National Free Library as discussed in chapter 8. 59% of the
students also used public libraries in addition to the University
library. A number of students, (13.9%) also use special
libraries. Government departments and colleges of education
libraries, seem to be the most useful to students. In Bulawayo,
where there is an advanced network of city libraries, some
students claimed to be using and actually getting books through
the inter-library loan scheme.

As figure 9.12 below shows, 38% of students do not find it easy
to get to a library and 4.4% , the majority of whom were women,

Fig. 9.12 Students' access to libraries.



4.4%

19.6%

38%

38%

■ V-easy

▨ F-easy

▨ Not-v-easy
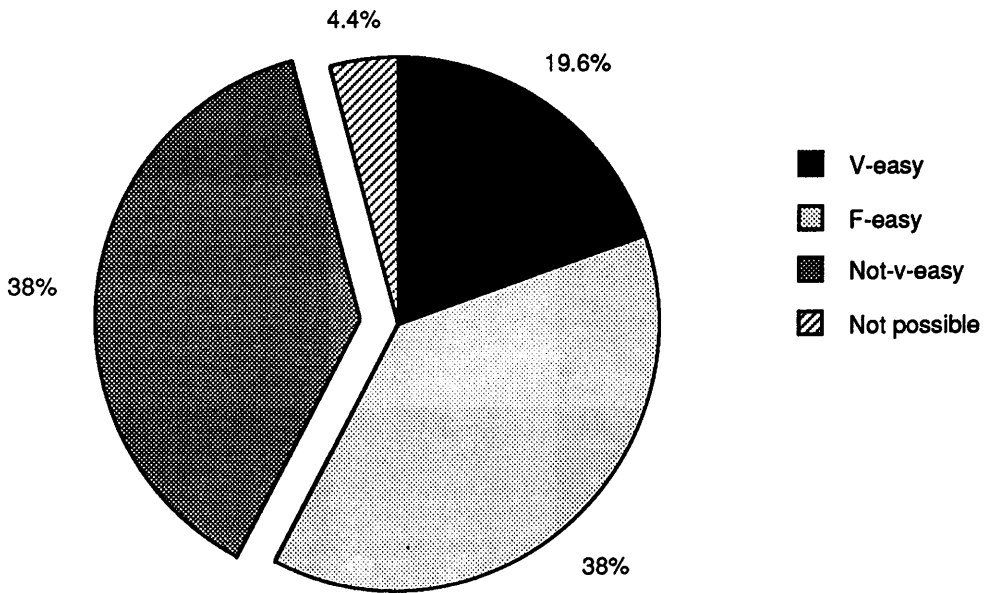
▨ Not possible

Fig. 9.13 Average cost of Studying.



Tr... Transport
Accom... Accommodation
B&M... Books and Materials
Subs... Subsistence during the day
Ot... Other

■ Amount in Zimbabwean

Amount in Zimbabwean $

600

500

400

300

200

100

0

Fees    Tr.    Accom.    Subs.    B&M    Ot.

Costs
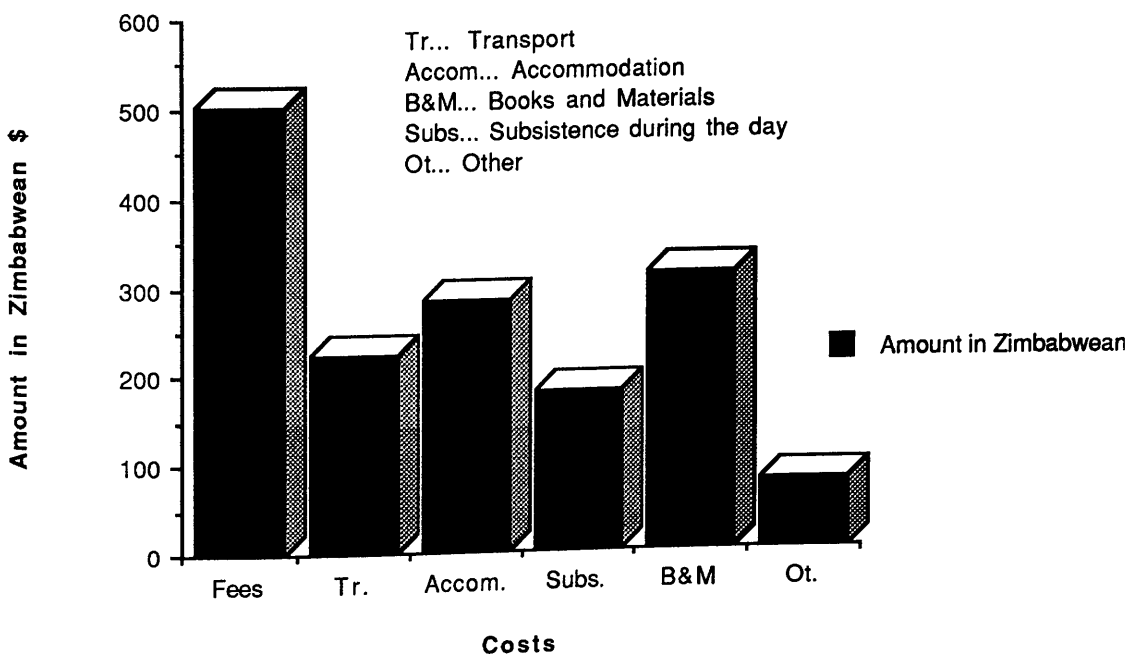
said that it was impossible for them to go to a library.

The main problems in using the library are shown in figure 9.12. It had been hypothesised that a large number of students would be unable to use the libraries because of physical distance. It turned out that only 15.2% of students were unable to use the library because of distance. The main problem for not using the library, was found to be the unavailability of books. Only 3.2% of students were unable to use the library because they had no time.

The lack of books in the libraries, points to major policy flaws in the allocation of foreign currency to libraries by the government. Libraries have to apply for foreign currency to buy books just like commercial companies, to the extent that they send book lists to the government for approval. Many libraries are surviving on book donations. Many of the books are of questionable relevance for he courses. Some libraries in Bulawayo are now restricting the number of books to be borrowed, to one book, due to heavy demand on textbooks. This point emphasises the need for distance educators at all levels to communicate with the librarians. As the OU discovered; initially, it was thought that it would not be necessary for their students to use public libraries, until they realised what pressure that put on local libraries. It is therefore vital for the UZ to check the adequacy of existing library infrastructure before they decide on further steps.

## SUPPORT INFRASTRUCTURE

The availability of essential communications infrastructure in Zimbabwe was discussed at length in chapter 8 and above. This section is an attempt to assess the availability of this infrastructure to students.

### Broadcast Media.

In reply to a series of questions from the author, the Director General of the Zimbabwe Broadcasting Corporation confirmed that there was 100% radio coverage in Zimbabwe. Students all appear to have easy access to radio. He went on to point out that there was 50% TV coverage, which was spreading fast. We corroborated this information by the large numbers of students from all parts of Zimbabwe who indicated that they had good TV reception in their areas, even though most students are in towns. TV2 is expanding to Bulawayo, and a satellite infrastructure is now in place, with the Commissioning of the Mazoe Earth satellite in 1984. Both radio and television may continue to be useful to educational institutions in the foreseeable future.

### Posts and telecommunications.

Evidence from previous chapters illuminates the indispensability of communications in distance education. Even the roots of British distance education, as we saw earlier, is traced to the 'Penny Post', which led to the first distance education shorthand lessons by Pitman.

It was encouraging to find out that the majority of students, 61.4% had a post office within walking distance from their homes.

Only 7% of the students live more than fifty kilometres from a post office. Even those who live away from a post office do indeed get their letters through postal agencies, schools, and so on. This information corroborates the information received from the Postmaster General in Zimbabwe discussed in chapter 8.

A majority of students receive their letters from the University in reasonable time, as the table below shows:

Table 9.11

```
-----------------------------------------------
   Time letters take to reach students from UZ.
-----------------------------------------------

            1-2 days       -     27.7%
            3-4 days       -     42.4%
            5-6 days       -      7.7%
              7 days       -     12.9%
            2 Weeks        -      6.5%
Varies but less than 1 month       1.9%
```

The cost of posting books within Zimbabwe has gone up to about Z$ 0.11 per book, with a 5kg maximum. This cost is important to students who have to post books to the University and the National Free Library which has postal readers.

It was also gratifying to see that 45.2% of the students had telephones at home and 88.1% at work. This shows that even if the telephone may not be a universal medium in Zimbabwe, it could be used much more systematically in student support or even in lessons. The Postmaster General indicates that, at the moment, it is not possible to use teleconferencing, but that the Gweru exchange is quickly being digitalised in order to facilitate this service in the near future.

There were only 1.9% of students who lived more than 50 km from a public telephone, whereas, 68.6% lived within walking distance (1-5km) of a public telephone. A further, 21.2% of students live within 16-30km from a public telephone. By way of comparison, it was interesting to note that all OU students are within walking distance of a post office and public phone booth. The importance of this finding is on student initiated contact with a tutor/ counsellor. The student can telephone the tutor at pre-planned times or during emergencies. Local calls cost about Z$0.20 per three minutes, while the cost of trunk calls varies depending on the distance. So the furthest student, in UZ's case 907 km away, would spend considerably more on calls.

Travelling by bus to a telephone booth appears to be fairly cheap, from information supplied by the students. Quite a number have their own cars and bicycles, which they use to travel to the nearest town.

Judging the reliability of communications is always a risky business. It was possible to gauge how students perceived the reliability of their own communications infrastructure, by asking them which was the quickest method for UZ to pass urgent course information to them. The author was surprised at the low status given to the telephone. Fewer than 3.3% of students mentioned it in the other category. On the other hand, the radio was selected by 27.8% ; whilst the newspaper and the post were scored 34.4% each. The Herald and The Chronicle were the newspapers most preferred, while Radio Three was the most popular radio station.

The communications infrastructure within Zimbabwe is by no means perfect, but it could be used more creatively and economically for student support purposes. Indications, from the response the author received from the Director General of Zimbabwe Broadcasting Corporation, the Post Master General and Editors of Newspapers, show that they are very keen to help educational institutions in whatever way possible; all organisations need to do, is ask.


COSTS OF STUDYING.

The part-time student at the University of Zimbabwe spends much more than a full- time student. We shall look at the main expenses, which comprise:

- tuition fees
- transport, to and from university
- accommodation while on residential study
- books and materials
- subsistence (lunches, teas etc.)
- other incidental expanses

Figure 9.13 serves as a summary of expenses incurred by part-time students. Fees range from Z$350.00 for education courses to Z$2,000.00 per year for MBA. The average cost for tuition fees is about Z$ 501.36. Full-time students pay the same tuition fees.

Books and study materials cost about Z$311.89 per annum, which constitutes the second most expensive item. The range of fees paid is about Z$1,500. Books are very expensive, and a cause for

concern to those who wish that unemployed youths may also be able to avail themselves of study possibilities at a distance.

The cost of accommodation is for those students who live outside Harare only. Students spend on average, Z$285.00 per annum. Many reported being unable to get suitable accommodation and having to stay in hotels for their residential periods, and spending up to $1,920.00. Accommodation in Harare, like in all capitals, is difficult to find. Some students live so far away from the university during their residential study period, that it is difficult for them, with the current transport situation to catch their morning lessons. In the afternoon they have to leave early in order to catch buses. As such, they hardly have time to use the library or meet other students. A young lady mentioned elsewhere in this study, had to travel with two young children and a maid to residential school and stayed at a hotel. It turned out that it was not possible for her to suspend studying without losing her right to write examinations at the end of the year and her credits. She would have had to start the course all over again. Distance education philosophy as we have seen right through this study, seeks to allow those learners who are unable to attend full-time courses to continue with their studies.

The reason why there are problems with accommodation is because part-time students are sometimes required to attend residential school while full-time students are in session. A major policy decision needs to be taken to ensure that the university benefits by accommodating the students. If all the part-time students had stayed at the university while full-time students were away on

vacation in 1988, the university could have made Z$318,345.00 (£92,273.91). Even after deducting the running costs of residential schools, this amount can be very useful for redecorating halls of residence and so on. The OU requires that all distance education students are in residence during summer school; It uses several university centres during the summer vacation, so that lessons can go on until 9.00 o'clock in the evening. This ensures that the timetable is fully utilised, without students leaving in the middle of sessions in order to catch buses and so on.

If students are accommodated in one place, the cost of travel is minimised once they have arrived at the university. At the moment students are spending on average Z$224.63 per annum on transport. The cost in lost study time is enormous.

The structure of part-time study at the moment means that a student has to spend on average about Z$3,425.49 for a three year course. Clearly, the majority of students need around Z$15,000 in order to complete their courses. It was not surprising therefore for students to point out that finance was their greatest problem. With only 21.7% of students receiving financial assistance for their studies, the cost of studying part-time is a strain for many students. The source of financial assistance for those who receive it, is from employers (11.4%); charities (0.6%), scholarships (5.1%) and other sources,(1.3%). Considering the costs involved, drop out rates are surprisingly low, at about 0.5%. Correlation between dropout and total costs of studying is very low at -0.20 and insignificant with p= 0.402.

About the same levels of correlation were found between fees and the reasons given that could force the student to drop out of a course. UZ part-time students are highly motivated and independent. Study at the university must mean more than general financial rewards. If financial incentives were the only factor, many students already enjoy a certain amount of financial comfort. Their motivation must therefore be goal oriented rather than instrumental. Dweck, (1986). (see chapter 4)

Concluding remarks:

Only 45.6% of students have studied by correspondence before. To those students who had that experience, this appears to have been of tremendous value. Distance education techniques can be thus acquired and improved through experience. The main problems of distance education can be found cross-culturally; differences between OU and UZ students appear to be in the availability of material resources and the degree of independence. Problems of studying at a distance found to be cross-cultural are:

- planning time
- self discipline
- motivation

For part-time UZ student and others in developing countries, material resources are also a major problem, especially:

- finance
- lack of books and other materials
- accommodation
- fees

In spite of all the above problems, part-time UZ students are prepared to persevere with their studies because of their high

degree of independence as opposed to OU students. They will only dropout from their courses if they fail to get money to pay for their courses or on account of serious family matters. Many will not even contemplate leaving their studies whatever the reason. A cautionary note is necessary however, concering the differences between OU and UZ students. No previous qualifications are required for OU students, but UZ students are heavily screened. Only those with very high qualifications and experience have a chance to be admitted to the course. It is believed that an understanding of the issues raised above may lead to a creation of policy issues, which will improve the provision of part-time education at the University of Zimbabwe.

At the time of writing, plans for a second university in Bulawayo had been approved by the government, but it is believed that demand for part-time education will increase in future because of the factors raised above, rather than decline.

We shall discuss the possible implications that the above results have for distance education at the University of Zimbabwe in chapter ten.

CHAPTER 10


DISCUSSION AND IMPLICATIONS FOR A ZIMBABWEAN MODEL


"It is the business of the future to be dangerous"
N.Whitehead


The preceding chapters have attempted to show, among other
things, that there is no absolute model of distance education
for any given circumstance; but that the underlying theme of all
distance education provision is to make education more accessible
to more people and more economically. In the past one hundred
years, it was revealed, that distance education has gone
through a rapid evolution, and is now sensitive to current
assumptions (King and Forster, 1985 p. 101) about:

  . the learning process. (see chapter three)

  . appropriate ways of treating people

  . the context in which learning will take place.

These fundamental assumptions have changed our views about the
distance learner, which have in turn transformed key aspects in
distance education provision, which involve:

  . course development decisions

  . student support decisions

  . decisions about administrative systems.

According to Northcott, (1986) these key aspects form the three
interrelated parts of a distance education system, shown below.

Course materials → DE ← student support

administration
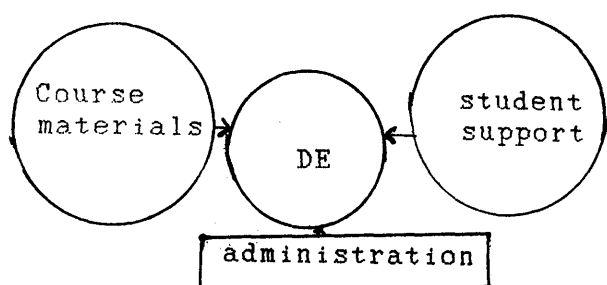
Figure. 10.1  Parts of a distance education system.

(source,  Jevons,  Northcott and Polhemus,  1986,  SADE research papers )


The  three  basic systems can be divided into several  subsystems depending on one's objectives,  as discussed in chapter, 3. It is however important to point out that the parts are so interrelated that  they  affect each other.  For example,  the type  of  study materials produced also determines  the planning, student support and administrative strategies adopted.

Chapter  9 revealed the state of distance education provision  at the  University of Zimbabwe and the problems being encountered by part-time  students.  The  present chapter will attempt  to  draw together  the various issues raised in the previous chapters  and propose  a  set of models  which may improve  distance  education provision  at  the  UZ.  Because  Zimbabwe  currently  has  one university,  studies  on  distance education provision at the  UZ have  often  been mixed up in the past with issues related  to  a national  distance education system.  This study is sensitive  to such national issues,  but it should be made categorically clear that  we are concerned here with a model specifically for the UZ. A  national  model  for tertiary level distance  education  is  a related but entirely different matter. We shall, however, reflect

briefly on such a concept in option D below, as discussion of distance education at the UZ forces one, in the current global circumstances, to look at a broader framework of how Zimbabwe can cooperate in regional and international initiatives. There have been however several developments ever March, 1986 when the University of Zimbabwe Distance Education Feasibility Study report was published, which may usher in new thoughts:

- A second UZ campus has been approved in Bulawayo, the second largest city, 436 km south of Harare.

- SADCC-wide distance education proposals have been researched and published. (Jevons, et al (1986/7)

- the SADCC Regional Training Centre based in Mbabane Swaziland has become more organised, and has completed a number of manpower projects. (Chizinga, 1987)

- the Commonwealth Cooperation into distance education is now a reality, with a headquarters and foundation staff appointed and based in Canada . (Commonwealth Universities Year-book, 1989 , uncorrected proofs)

Regional and international cooperation in distance education is now vital to the current distance education efforts in Zimbabwe, but specific details are outside the scope of this limited chapter. We shall therefore concentrate on the UZ study; and only highlight broader issues where there are direct implications for local provision.

Developing simultaneously with these regional and international initiatives, there has also been much research activity in distance education within Zimbabwe since 1980. As a result,

various models have been proposed, for both a national and a UZ scheme of distance education, as was indicated in chapters 1,2 and 8. (see also, Dock, (1982); Jevons et al (1987) Matshazi, et al (1986) Edington, (1986); Gatawa, (1986) and Chivore, (1986).) At the time of writing, (June, 1989) yet another project, chaired by Peter Williams[1], Director of the Commonwealth Secretariat Education Programme, had produced a report which has been presented to the Zimbabwean cabinet. Even though this report has not been published, it examined the whole spectrum of tertiary level education in Zimbabwe. The government quickly announced that a second university would be established in Bulawayo. (As a matter of fact, the issue, as far as the Zimbabwean public was concerned was not whether a second university was necessary, but where it would be located. This shows a deep sense of concern by the Zimbabwean public and government, that all is not well in tertiary education, but they are unclear about either the route or the model to take). As such, since we are not going to attempt to re-invent the wheel, we will draw heavily on the existing proposals.

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[1] Requests by the author to see the report were fruitless. (See appendix J).

Even the students are aware that current part-time provision at the UZ is far from being systematic distance education. As one observed, the heavy workload and the requirement that students attend residential study is quite onerous, and commented by asking:

> If distance education is made more residential, doesn't that amount to setting up new schools? ... Can't we have a longer period for slow learners?

Another student asked:

> Why is the University of Zimbabwe reluctant to embark on distance education when other prestigious universities provide it?

And yet another student also asked:

> How can distance education be improved so that it is not so demanding, as it is in terms of:
> a) finance
> b) availability of books.
> c) adequate time to study.

The comments and questions asked by these students were echoed by many others, they highlight the need to develop a model which is responsive to the three fundamental issues referred to above as well as the political climate. The main problems encountered by the students at the moment were summarised as:

- finance

- acute shortage of books and other study materials.

- Self discipline and motivation required for independent study.

- accommodation during residential periods.

- poor student/tutor communication (the majority have no personal tutors, with whom they can identify).

- very slow assignment turn around, and perceived biased

marking.

It is therefore imperative that any further developments in the provision of distance education at the UZ, should be sensitive to students' problems.

We shall now proceed to recommend and propose a model which may be more sensitive to the needs of the students.

## A model for the University of Zimbabwe.

It is neither intended nor suggested that there can be only one model of effective distance education at the UZ. Jevons et al (1986), in their excellent research project, demonstrate the complexities of recommending models to organisations and institutions. In their report on the SADCC distance education feasibility study; they came up with no less than ten models. They then reduced the risk of imposing an unpopular model by encouraging country representatives to choose a model they regarded as most suitable for them. (see Jevons et al 1986).In this study we shall consider only four possibilities:

- in the short term, improving current provision, Option A.
- in the medium term, a Centre of Distance Education model, based at the UZ main campus, Option B.
- in the long term, a Centre of Distance Education model based at the new University/Campus in Bulawayo, Option C.
- in the long term, a Zimbabwean Open University, Option D.

We shall discuss each option briefly, concentrating our attention on option B, which seems to hold the greatest promise for a

fresh start. It is important to point out that students'interests
must be taken into account in all these models if they are to be
effective.

Option A: Improving part-time provision:

Option A is an attempt to improve current part-time provision
more than anything else. It is recognised that new plans take
time to be introduced, but in the meantime there are those flaws
which can easily be corrected. Option A is therefore not a
recommended model at all, but an attempt to minimise the serious
problems students at the UZ are facing at the moment. The
current state can be shown in the diagram below:



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                    lecturer
        administration          face-to-face tuition
                                     part-time
      UZ                             students

                                     independent
                                     learning

                                     study materials
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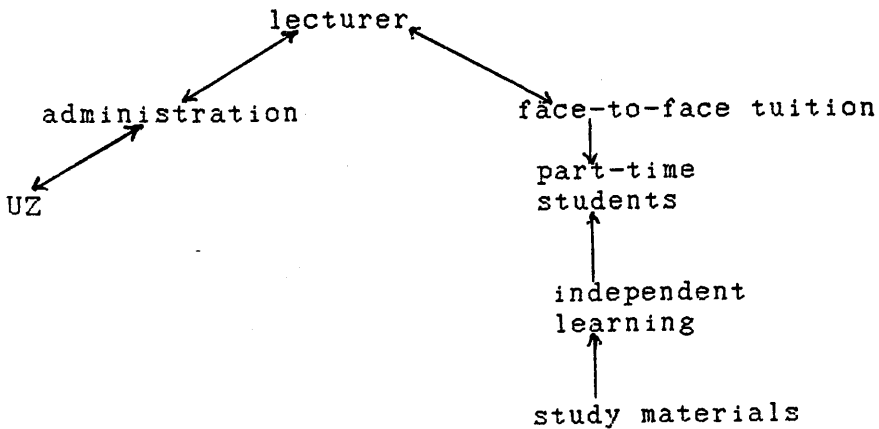
Fig. 10.2 Current relationship between part-time students and
          UZ lecturers.

An alert observer will notice straight away that the above model
does not even resemble old fashioned correspondence teaching, as

it is much worse than that, as students are not provided with study materials at all . The responsibilities of the UZ are mainly confined to 'administration', registration, collection of fees, checking on attendance to face-to-face sessions, setting examinations and awarding qualifications.

Fees, accommodation and transport costs are very high, as we saw in chapter nine and there in no accommodation policy for part-time students. It is recommended that all part-time students should be accommodated at one place during residential periods. Rather than have three residential periods, it is recommended that there should be only two sessions of three weeks each; one in January and the other in August, both sessions should be held when full-time students are on holiday. Sessions should remain until adequate learning materials have been developed. At present students indicate that there are many free periods. If efficient utilisation of time is implemented, one week of residential study per session may prove adequate. The OUUK experience is very valuable here. At the end of one week of residential study, OUUK students are usually very exhausted, because time is fully utilised. Some students hinted that they had problems getting leave from their employers. Such students should not be penalised. A plan could be devised where only one week in each session could be compulsory. Those students who cannot attend the rest of the session could be encouraged to watch special TV or radio programmes which should be broadcast summaries of each day's activities while residential school is running. Guest lectures should be held in the evening as much as

possible so that there could be a chance for live broadcasts with those students unable to attend participating by telephone.

A modular approach to courses should be developed, so that those students who are forced to suspend studying for a while, for whatever reason, can resume from where they left, or indeed be allowed to continue with their studies by communicating with a personal tutor through print or by phone. It is therefore vital that each student is allocated a personal tutor. At the moment the majority of students either do not know their personal tutor or they do not have one at all. We saw in figure 9. that, many students do not contact university tutors when they encounter difficulties in their work, as a direct consequence of not being allocated a personal tutor.

The Students Union should provide a play/day centre for part-time students' children. Trainee primary school teachers, who are usually on holiday during the suggested period, can be engaged to look after the children. This will encourage more female students to participate in distance education courses.

Course development: Most of the courses are basically developed as if they were for full-time students. There has been an illusion fostered mainly for public relations purposes that distance education is exactly the same as face-to-face instruction. It is of course different in both style and learning style adopted as we have seen. As such lecturers at the UZ have taken distance education for granted. Lecturers provide direct face-to-face instruction for an average of about 30 days per

of about 30 days per year. They meet students for a fortnight every term. Students are given recommended reading lists and assignments to submit on certain fixed dates. It is then up to the student to find these reading materials. Course provision across departments is so diverse that it is difficult to have a co-ordinated approach. (Matshazi et al. (1986). But students are generally expected to learn through prescribed books.

Students point out that they cannot find most of the recommended books either in bookshops or in libraries. The University library is overstretched, and is unable to cope with full-time students. But they find that books are the most effective medium for their studies provided that they can locate them.

Enough books should be ordered beforehand, so that students are able to purchase all the essential books from the University Bookshop. If they cannot get them there, where else can they be reasonably expected to get them? On a visit to Dundee College of Education, which offers educational technology through distance education, the author was informed that many publishers are sympathetic to educational institutions as regards copyright. It was pointed out that provided a specific number of copies and pages were required, it was cheaper to get them from the publishers, than copying them at the institution. At 1987 prices, it cost an average of 2 pence per page for the college to get about 75 copies of a chapter they regarded as important for their students. Of course these charges will vary from publisher to publisher.

Part-time students should be able to borrow books at the main library at no cost to themselves. At the moment, students sending books to the library by post have to bear the cost themselves. The university should make arrangements with the post office for students to send books free or at the university's expense. Indications are that the Postmaster General is willing to consider any special requests. (see chapter 7)

Student support. Northcott, (1986 figure 10.3) draws from the work by Brindley et al(1985) and Smith, (1980) to emphasise that student support should be viewed as a continuum connecting course materials and the student. The main plateau in the continuum emphasising different perspectives of learning and teaching includes:

- tutoring ------ (Subject centred)
- advising ------- ( Problem centred)
- counselling ---- ( Person centred)

( for details, see Northcott, (1986 : 7-7)

There should be a balance among the three perspectives in any effective distance learning system. It is emphasised that students should be given pre-enrolment counselling and tips on how to study and what to expect in their respective courses. There is a need to instil confidence in students.

In order to help staff handle the above aspects of student support, there is an urgent need for staff training at all levels. The areas of emphasis should be on developing course materials, communication skills, particularly on the use of the telephone to counsel and support distance education students. The

Faculty of Education should introduce without delay an Advanced Diploma/ M.Ed degree in open and distance learning techniques, to be offered initially to members of staff interested in developing distance learning courses. As far as possible, the course for staff must be delivered by distance education methods, so that lecturers get to know what it is like to study at a distance. Two high quality courses are currently on offer in Australia (King and Foster, 1985) and West Germany, (Holmberg, 1982). Initially, the UZ could benefit by cooperating with those institutions. The author is aware that UZ has now got a University Teaching and Learning Unit, in addition to the Centre of Educational Technology and the Central Printing Unit. These units should be combined into one department so that they can benefit from economies of scale and offer the new M.Ed (open and distance learning) course. It is hoped that staff would be much more interested in taking part in part-time student instruction if in the process they benefited both materially and by gaining an extra qualification.

Some courses, for example the B.Ed part-time, have co-ordinators who carry this responsibility as a fringe aspect of their job, it is felt that part-time course co-ordinators should be full-time posts at senior lecturer level. Appointment should be made to these posts on merit, interest and experience in distance education techniques. Three appointments should be made, one each for the faculties of Education, Social and Business studies and Science. At the moment, only interested members of staff can utilise their services within their departments. These three

people may serve as temporary catalysts for providing systematic course notes, books, photocopies, readings, counselling etc., to part-time students. On the other hand, it may be possible to move straight to Option B. This model is used by many universities, notably the Universities of New England and Deakin University in Australia and the University of Zambia. (see chapter 8).

## Option B: dual mode

The foundation for our proposal here is based on the UZ's own "Feasibility study on distance education", Matshazi et al (1986). (see chapter 1 and 8) The results of the feasibility study were filtered from interviews held with about thirty officials within the University of Zimbabwe and the public sectors. The proposals were based on a number of subject/ institution centred principles.

Basic principles: Matshazi et al. (alternatively referred to as the Feasibility study) suggested four basic principles for the establishment of distance education at the UZ:

- that the dual mode system be adopted.
- parity between the internal and external qualifications.
- external students must be enrolled right across the university .
- the same staff must be used for both internal and external students, enabling students to be able to transfer from one mode to the other. as and when it suits them.

This author would place different emphasis from Matshazi et al

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but supports in principle the Feasibility study report, that distance education should be provided by dual mode, not that there is any choice, since UZ is a traditional university. There is nothing unique about that recommendation because, as Sewart says:

It would appear that distance education systems now in existence are single mode or dual mode because of historical accident and external factors rather than as a result of educational debate. Sewart, (1986)

Dual mode is appropriate for UZ to expand and enrol up to 4,000 external students, depending on the availability of resources. It is generally agreed that the optimum number of external students for dual mode universities is between 4,000 and 6,000. (Perry, 1984; Kaye and Rumble, 1982; Sewart, 1986, etc.) In fact, in his analysis of the 'Way forward for distance education', Fred Jevons, (1986) concludes that:

> Dual mode institutions rarely have student numbers high enough to adequately reap economies of scale.

Economies of scale may not always be the main incentive for the development of distance education. Sometimes the number of possible clients is small, facilities are limited and employment prospects for graduates limited. In such circumstances, conscious decisions are made to adopt dual mode, which is quite capable of handling average numbers of those already in employment needing to improve their qualifications and productivity. Zimbabwe may want to use dual mode in order to minimise the number of unemployed graduates.

Figures for potential clients are sketchy, but numbers of school

leavers, UNISA students within Zimbabwe, unqualified teachers, and those not accepted for full-time study may imply demand. There is of course the potential of the SADCC and Commonwealth market which may ensure substantial demand, if appropriate courses are developed. The courses must be credible if they are to be worth anything to the graduates, that is why parity is considered important.

Parity: Small numbers of external students at the moment and unease with the quality of distance education may have led the Feasibility Study to overemphasise the question of parity. The ZINTEC experience (Gatawa, 1986) shows that there may be no problem with credibility as long as external and internal students write the same examinations.

What Matshazi et al. (1986 p.22) term university coverage is trickier, and more difficult to support for two reasons:

- Some subjects may need a lot more student support than can be provided at the moment.

- Some subject areas may have no employment prospects, and it would be unwise to provide such subjects to more students. (There are already unemployed qualified artians) Student numbers should be increased for those areas where there are chances for employment, or where the students can benefit directly as persons or in improved earnings.

<u>Adequate resources</u> : The author agrees entirely with the proposal made in the Feasibility study report that adequate resources should be provided and a distance education centre within the university be established. An opportunity has presented itself with the establishment of a second campus. Distance education provision can now be made the responsibility of the Bulawayo campus, where a clean slate can be used and staff contracts for this new institution could be drafted accordingly.

It is believed though that the impression given by Matshazi et al, that minimal expansion of university resources will be required, may be inaccurate . That has been the case at the University of Zambia whose model was analysed in chapter 8. Inaccurate plans have led to decline rather than expansion. Deliberate concealment or ignorance about real expenses may have assisted in seeing the OUUK take off, (Perry, 1976) but times are different now, as experience from other institutions is readily available. Initial investment in distance education is high and economies of scale are reaped through large student numbers not the other way round. We shall discuss this issue further, on the section on student support.

<u>Transferability:</u> The idea that students should be able to register for any mode depending on their circumstances is congruent with the ideals of distance education . In addition, students should be able to transfer their course credits to other institutions both at the regional level and at the internationally. There should however be some guard against the

drift into a situation where students cannot complete a degree or their courses through distance education alone. In Zambia, students still have to attend full-time in their final year, after twenty three years of distance education experience. B.Ed students at the UZ have to attend full-time for a whole term (three months) during their final year. Mjaaland, (1973) believes that prolonged face-to-face sessions have several disadvantages:

. face-to-face meetings reduce the number of students in distance education.

. integrated tuition is a limiting factor in the students' own learning.

. integration face-to-face tuition makes it more difficult to evaluate the effectiveness of distance learning materials and limits the possibilities of improving them.

. integrated tuition reduces the advantages of geographical independence in distance education.

. only a small percentage of correspondence students are prepared to take part in direct teaching situations.

Some scholars may dispute some of the points Mjaaland makes above, but there is an element of truth in some of them as we have seen in chapter three. The last point may prove a little more difficult to substantiate as our own findings indicate that the majority of distance education students welcome face-to-face contact . We discussed this issue in some detail in chapter nine.

On the basis of these four basic principles elaborated above, Matshazi et al, go on to propose a model they perceive as

suitable for the UZ. Figure 10.2 below is an attempt to summarise that model.
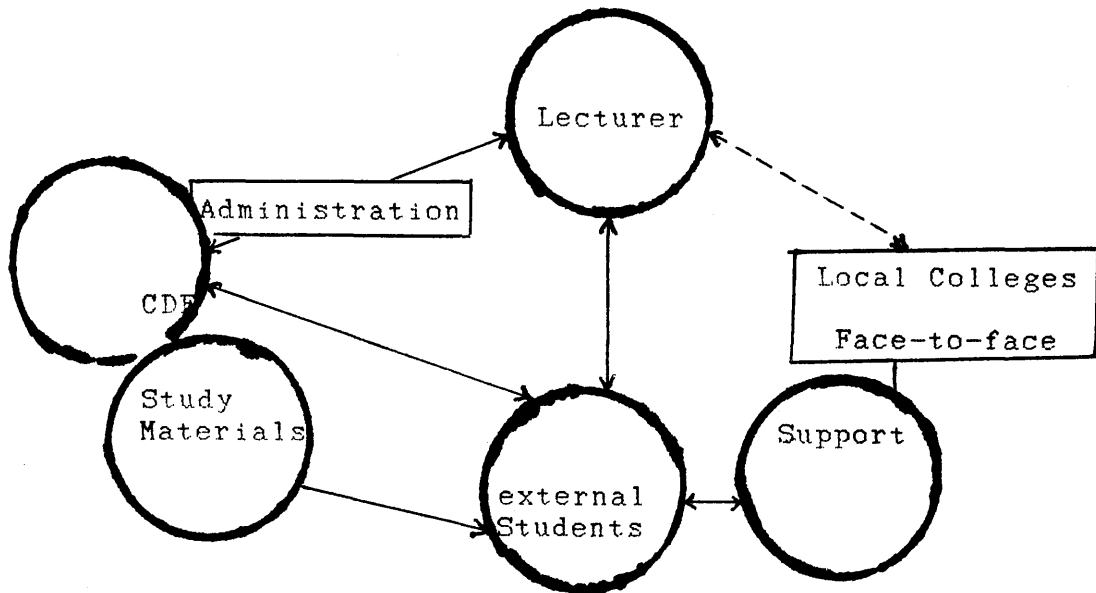
Figure 10.3  Proposed model for external students.
Source:  Developed from ideas by Matshazi, Perraton and Guiton,
         (1986).

The above proposal is slightly similar to the correspondence +
face-to-face model, developed by Freedman, (1982 p.163). If it is
fully implemented at the UZ, it reveals several weaknesses to the
Matshazi et al model, in the three major systems. We shall
highlight these flaws as we develop our own model, for now it may
be enough to give an indication of what the sections causing
concern are:

1.  Course development subsystem.

    -   accountancy is very important, and easily lends itself
        to Distance education. (see Commonwealth Secretariat
        Report, 1987 and Jevons et al (1987).

    -   study materials: there is a contradiction, between what
        a lecturer teaching in the external mode and the course
        team system proposed. Contradictions are implicit
        rather than explicit.

    -   copyright clearance is vital to distance  education and

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should therefore be planned into the system at a senior level.

2. Student support subsystem.

- student/tutor contact: distance education students should not depend on one lecturer, they should depend on the institution.

- use of regional and local centres does not take into account realistic student numbers and cost of running them.

- use of media: broadcasting is more available than is implied. More use of the telephone is called for.

- role of public libraries: no mention is made of the role of public libraries which are already carrying the burden of educating school leavers.

3. Administrative subsystem.

- target population: disabled? UNISA students? There is no suggestion of how UNISA students can be recruited to study at UZ.

- planning: critical path analysis and activity scheduling unrealistic, thus project was never implemented. It is not possible to develop distance education materials for a whole degree programme in three months.

- residential schools: The feasibility study is insensitive to the problems students are facing in getting leave and accommodation.

- manpower: required personnel, staff training etc. estimates of manpower required were rather too economical for a viable quality distance education project. There must have been a project officer to see such a tight scheduled project through.

- research and consultancy: these are taken for granted.

- liaison with other organisations within Zimbabwe, regionally and internationally.

The illumination of the perceived weaknesses of the Feasibility study model makes it possible to propose an alternative model which advances from existing research, without repeating all the good and strong points mentioned above. Thus it is hoped that the

danger of attempting to reinvent the wheel by the author, may be minimised. But first, we shall examine the course production strategy proposed in the Feasibility Study.

## Course production proposals in the Feasibility Study:

Various models of course development are described by Lewis, (1971) Northcott, (1986) and many others. The most well known is the course team model: Perry, (1976) feels that this was the greatest contribution the OUUK made to distance education. The model is based on the premise of programmed learning, educational technology and the systems approach. Specialists from various disciplines, broadcasting, educational technology etc. come together under a course chairman and produce a course. Some course teams involve as many as thirty-two people at the OUUK. The method can be cumbersome, but properly managed, it has a potential of producing very high quality materials. It is advised that initially, a modified version of the course team approach should be used to set a standard for courses at the CDE.

Shelf life for courses produced through this method is usually presumed to be between five to eight years. In some parts of Africa books are difficult to find, any course produced may last for a longer period than the recommended five years. So the quality should be even higher than where books and writers are readily available. The idea should therefore be to produce 'durable' courses in those subjects where it is possible and the paper used should be of the highest standard.

The author/ editor and the contract author/ faculty models, (see Northcott (1986 p.7-2) where authors are contracted to write courses, are strategies for developing courses quickly. The chief advantage with these models is that a wider pool of expertise is possible, as some experts may be unwilling or unable to join course teams because they are time consuming. Initially though, courses should be produced by course teams in order to set a certain standard as well as train staff.

The UZ feasibility study proposes the use of the same staff for both external and internal students, as part of their normal duties . In other words, each lecturer would be responsible for producing instructional materials for external students as well, in each course. It was mentioned earlier that the study dismisses the use of television, (chapter 9) but encourages the use of radio, for economic reasons. In chapter nine it was argued that there could be more creative use of media, as an appropriate infrastructure is already in place and underutilised in Zimbabwe.

The use of the same members of staff to teach in both modes has been both praised and criticised. Those in favour of dual mode, highlight the fact that courses are changed regularly and are more responsive to the needs of external students. Antagonists point out that the intuitive nature of course development under these circumstances (Northcott, 1986) may produce substandard courses and that it is suitable only at the 'cottage industry' level, not for mass distance education. A more fundamental point is that it is presumed that all university lecturers can and are willing to deliver their courses through distance education. At

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the UZ, that may be an inaccurate assumption, as the early problems in course development at the University of Zambia and the OUUK show, Siachiwena, (1988) and Lewis, (1971 a, b & c). Nothing can be taken for granted in this respect. Staff development should be designed as an integral part of developing a modern distance education system, as Northcott (1986) argues.

Another more important point, is the fact that the UZ has a high staff turnover. Lecturers at all levels are retiring and leaving for the private sector and other places all the time. Many senior staff left at independence; many more are still leaving as and when they get jobs elsewhere. Many members of staff joined the University when it first opened in the 1950s and early 60s, and are of natural retirement age. Obviously, those still planning on leaving at an opportune moment, will have very little interest or commitment in developing any serious study materials. A laissez-faire climate therefore exists which is very hostile to any change. Some of these senior members of staff have been known to be frustrating junior lecturers (often blacks appointed after independence) to a point where there is no alternative for them but to leave. Unless there is staff stability or specific period contracts for those lecturers involved in distance education, external students can find themselves in a serious position when an individual lecturer leaves. As such, the author believes that under current conditions of high staff turnover, student tuition should rest with the CDE instead of any single lecturer. Individual lecturers can be used for student support purposes, which of course includes tuition. Colleagues at the UZ may be

against this idea, but it is clearly for the interests of students, and should therefore be implemented.

Evidence given by students in chapter nine clearly shows that there are wide gaps in the provision of adequate tuition for part-time students. One of the main barriers seems to be unbearable workloads on lecturers, coupled sometimes with negative attitudes. It should be pointed out too, that some members of staff are resisting involvement in distance education as a matter of principle. Their employment contracts do not oblige them to teach at a distance, and to expect that all staff would be philanthropists as some people within Zimbabwe suggest, may be a brave act of faith. Recent events ( The Chronicle, (11/06/89 p.1) where a UZ lecturer was detained for expressing views which were critical of the government's proposed economic plans, on radio 4, are not helpful. Two radio 4 journalists who interviewed him were also suspended. Radio 4 is meant to be an educational channel, but if it is not able to broadcast critical ideas, its educational value will be quickly diminished. It may be very difficult in future to get lecturers to use the mass media for distance education lectures if they are then arrested for expressing scholarly views. The frosty relations between the university and the government may mean that more careful planning is needed, for expansion. Lecturers may be operating within their rights to work by the letter of their appointment contracts.

New developments in distance education, should be preceded by advance planning, training and the appointment of appropriate staff. Effective communication should be extended to the

university administration and staff too, not just students.

It is therefore recommended that course teams be used in order to ensure the production of quality materials and to train staff as well as mentioned above. Each faculty, should either second senior staff to CDE or the CDE itself should appoint high quality staff who will serve as course team chairmen. COSU, (see figure 7.1 p.212 ) which has been one of the most successful dual mode centres in Africa so far, uses this model, but it is worth noting that each sector: Teacher Education, Business Administration and Media Production is headed by a senior lecturer. Preferably, the director of CDE should be a professor appointable as pro-vice – chancellor. In addition to that, there should be one deputy head for academic planning and development and another for media production. These two people can be at Associate professor level or fully tenured professors. At the UZ the deputy head media services should also serve as regional and international contact. He should be assisted by a senior lecturer who would have a specific brief for multi-media copyright clearance. This should be an important element of planning, as not only will the CDE want to utilise other people's materials, it will want to market its own products. Other institutions even within Zimbabwe would perhaps want to use UZ materials. Machinery should be in place to deal with such an eventuality. The appointment of high quality staff seems to have paid dividends in the development of distance education in COSU at the University of Lagos.

Courses developed should be presented in broadsheet book form, on high quality paper. UZ needs to expand its printing capacity,

and indeed establish a publishing company to look after this sector. The rewards seem enormous at this stage. By appointing the right staff, this publishing company may commission its own authors, opening chances for lecturers to publish their own work and alleviating shortages of key books. Deakin University for example, Northcott (1986) points out, is one of the biggest academic publishers in Australia.

The development of effective audio visual materials is an essential part of course development. As far as possible, lecturers should be encouraged and trained in participating in the production of materials for their own courses. Initially, these materials may appear to be of poor broadcast quality, but it has been proved in China (Hawkridge, 1987) that students learn better from relevant materials produced by their lecturers than from fancy material acquired from elsewhere. Lecturers may want to use the media for student support, to send out urgent course information and so on. Developments mentioned above may, however, cast doubt on the enthusiasm lecturers would otherwise have in using the mass media.

Student support:

The physical location of study centres is usually regarded as important in distance education. Northcott and Shapcott (1986) extend the concept of student support and differentiate between universal support and individual support. They point out that universal support is that type of support built into the distance education system which can sometimes be so institutionalised that

it is impersonal. On the other hand, individual support is regarded as being student centred and focuses on the individual student.

It seems in the main that students lack and prefer individual support. The two fundamental issues, individual /universal support, are crucial in the design of local study centres. In Zimbabwe there are now fourteen (14) teachers colleges, there is at least one college located in every province. They are all associated with the university. It seems therefore appropriate that the Feasibility Study seeks to use them as local or regional study centres. In addition to these colleges, there are nine technical colleges, one in each province. The Harare and Bulawayo polytechnics also offer the UZ Bachelor of technology degree. Again, the Feasibility study points this out, and that Bulawayo can serve as a regional centre. The key omission in Matshazi et al's recommendation on study centres relates to the purpose of the local centres. Will they be used for universal or individual student support? If they are going to be used for universal support, they are not viable, as student numbers are not high enough to warrant this approach in every region. Local centres which are universal support focused, usually tend to duplicate in a small way the services provided by the main centre. Resources and staff are required to run such local centres, and the cost can be prohibitive, if a quality service is aimed for.

Local centres focusing on individual support, require staff and co-ordination. In the Zimbabwean situation, a hybrid solution may

be found where a local study centre can be used in conjunction with a mobile centre.

The first task then is to train appropriate manpower from the selected colleges, with an interest in distance education to staff local centres particularly in the area of counselling. Some local councils may well provide their own facilities as is the case with the Fernuniversitat in the Federal Republic of West Germany and with universities in Canada, Australia and many other countries. In Zimbabwe local libraries can be involved in the scheme if they so wish. There is evidence that many libraries have gone out of their way in order to help correspondence students.

The success of the Bulawayo Public library, mobile library , (Doust, 1986) leads one to presume that smaller centres could well be served by a mobile university centre. Properly staffed, (see Salter, 1982) many students, including those in our study, indicated that they would use and benefit from mobiles. There is a precedent on this, in Canada and the Open College (1987) in the UK. In the later case, the bus is used mainly for publicity.

More effective use of media networks, the telephone, television and radio was proposed in chapter 9. A word of warning would be that programmes should be as simple and relevant as possible. The idea should be to produce programmes that facilitate or reinforce student learning. The temptation to create a white elephant of production hardware should be resisted. The ZEFF at the FernUniversitat clearly demonstrates the point: it has marvellous

studios which produce very few programmes.

The administrative system: The major administrative structures of a distance education system are similar in many ways to any tertiary level institution as Matshazi et al(1986) point out. But there are critical differences in precision, and these make a difference between a successful institution and the one that fails. Northcott (1986 p.7-6) lists the following:

- publicity about courses;
- course information;
- dealing with student applications and helping with student selection;
- enrolment and record keeping of students;
- delivery of course materials and handling enquiries about this;
- assignment traffic control;
- examinations - organisation of examination centres network;
- overall budgetary control of a DE system.

On the question of budgetary control, Northcott emphasises that:

> Effective financial management and control: are a sine qua non of success.

In a way, this is a central issue, and as such, it has been one of the central themes of this work. There is evidence that administrative issues are well discussed and are therefore a closed chapter, as literature is readily available on this

subject. It is however important to take local conditions into account. (see Rumble, 1986 and 1988, etc. also chapter, 1, 3 and 7 above).

Once the administrative infrastructure is in place, emphasis should then be placed on:

- planning

- system evaluation

- liaison: local, regional and international ( the survival of distance education is now being battled out at this level and new institutions will be wise to plan this into their mainline activity, they may save themselves money and effort by working with other institutions. It was shown in chapter 9 how similar distance education students are.)

- staff training is critical and a common feature of all successful distance education systems.

The first three critical areas above, are well covered in the literature, but because staff training is so vital, we shall expand on it a little.

Staff training and development: Staff training is one issue where all distance education scholars and practitioners are in unison. In a related context, while appraising the staffing function in education in Zambia, Coombe, (1988) calls for the integral planning for the staffing function. He points out that:

> The staffing function is the central managerial function of education systems... Professional development and

effectiveness of the teacher must be of prime importance. Such matters cover a very wide range... most if not all of them affect, or have the potential to affect, the teachers' morale, competence and professional confidence. Coombe, (1988 p. 2)

When planning a new distance education system on an existing institution, it is vital to design a programme of staff development as Kenney and Reid (1986 pp. 152-214) propose, to:

- conduct a comprehensive problem centred training needs analysis ( this should include the needs of the institution as well of the individual lecturer/ tutors etc. )

- determine training objectives;

- determine appropriate training strategies;

- plan and implement the training;

- evaluate the training programme;

It may be appropriate here, to say a little more about these points.

Objectives: Determining training objectives for existing staff is a very complex exercise, mainly due to attitudes. There is now a lot of literature on training and staff development. The best way to get around this is by focusing first on institutional objectives, which are in the university's charter. Having done that, a decision should be made whether a comprehensive analysis of training needs is conducted or a problem-centred analysis. A comprehensive analysis seeks to appraise all aspects of the job, whereas a problem-centred analysis focuses on a particular difficulty needing a training solution. (Kenney and Reid, 1986

p.161) In the case of CDE, because it is being built onto an already existing institution, the latter method is considered the best.

It is also vital to draw short-term and long term objectives for a training plan. If a training policy does not exist, the best training objectives can be in danger of not being effective. One of the most important duties of the director of the CDE is to draw out a clear training policy which takes into account existing institutional policies.(Rumble 1986). A training policy must be clear as to:

- who should be trained
- purpose of training
- when training should take place
- who pays for what type of training
- internal and external training, etc.

Strategy: Institutional and individual training needs will be used to determine the training strategy to be adopted. Sometimes these clash so a balance should be found. There are are a number of strategies which can be used to train staff:

- training on-the-job
- planned organisation experience
- in-house courses
- planned experiences outside the organisation
- external courses

The first three strategies listed above, are all institution based. Training on the job is the most traditional method of

developing staff. For example, staff involved in editing, are trained while actually doing their jobs. The main advantage of on the job training is that very little time is lost, as the employee does not have to travel for training. The main disadvantage is that training becomes muddled and its quality relies heavily on the supervisor or the person in-charge of the training.

In-house (institution based) training is much broader as employees may have to leave their jobs to an in-house training centre. Various departmental academics and specialists may give training related to their specific area. At the UZ a Centre of Learning and Teaching has already been established and a director appointed. It has already been suggested above that this centre should be merged with the CDE. Its director can then be in-charge of an overall training strategy.

Planned organisational experience involves the training of staff by moving them to other departments for a specific period in order to gain experience. One finds a good example of this at the OUUK, where educational technologists are given specific subject areas to work with. In order to have inside experience, other staff members are also seconded to other departments as members of course teams and so on. Staff in the materials dispatch department may be placed in the production section for a while, so that they see how the materials they send to the students are produced; or in the counselling and information section, in order to appreciate students complaints about misplaced assignments and materials. This is a well known strategy, but it can still be

used very creatively.

External courses and planned experience outside the organisation are very useful but there is a need for clear objectives. Those responsible for sending people for training outside the organisation should know what the participants will achieve or at least the knowledge they hope they will gain.

Many universities provide for staff to go on contact visits. This can be a most productive way of establishing contact with specialists and so on. It can also be a very expensive waste of time, if staff spend time sightseeing instead of examining specific areas of interests. External courses should not be regarded as holidays, or just a chance to go overseas. They can however be used as rewards to dedicated staff and jobs well done.

Implementation: There is no one way of implementing a training strategy, but ideas should be drawn out so that nothing important is omitted. Kenny and Reid (1986 p.203) have again provided a very useful set of steps which may serve as guidelines:

. review the training objectives

. determine appropriate sessions

. assess training times

. draw up the timetable

. brief the trainers

. organise the preparation of material and equipment

. monitor and evaluate the training

It may not be necessary to follow all these steps all the time, but it is regarded as helpful to do so in order to facilitate

evaluation.

Evaluation:  It may not always be possible to evaluate  precisely
the impact of all training,  as this depends on the nature of the
objectives  in the first instance.  Evaluation in certain courses
will  be  easier than in others.  Some aspects  of  the  distance
education  system will lend themselves to evaluation.  It is easy
for example to test if a tutor can use the telephone for  tuition
and instruction by using simulation and games.

Distance education is both a very sophisticated teaching strategy
as  well  as  a practical one too.  If students  write  in  their
hundreds complaining about something, it may be an indicator that
training  is  required in that aspect,  and if training had  been
given,  possibly it did not go well.  Rather than treat  training
as  a theoretical  issue,  in distance education it should be  as
practical  as  possible,  and  sometimes the solutions  are  very
simple too.

It is appreciated that there are problems in designing a training
function in existing institutions.  It is much easier to plan for
a CDE in a new institution; that is why we proposed option C.


OPTION C: DUAL MODE IN A NEW INSTITUTION:

Option  C model is exactly the same as option B above except that
it will be based at a new Bulawayo campus, the main UZ campus may
house  one  of the regional offices .  An Institute  of  Distance
Education ( IDE ) could then be established.

<u>Advantages:</u> There are a number of advantages for basing IDE at the Bulawayo University (campus):

- New staff can be appointed to IDE, and fresh conditions of employment which emphasise qualifications or interest in distance education can be made essential.

- Purpose -built facilities may facilitate smoother communications and a more conducive atmosphere.

- A temporary sense of novelty may get things off the ground quicker, with maximum publicity.

- Bulawayo is the base of a number of essential public and private companies, eg. the National Railways, Cold Storage Commission and the National Free Library of Zimbabwe.

- There are three colleges, a primary teachers' college, which also has the only unit training teachers for the visually impaired in the country; a secondary teachers' college and a technical college which already offers the UZ Bachelor of technology degree. These colleges may serve as a useful pool for support and part-time staff.

- In addition to the National Free Library, as was pointed out earlier, Bulawayo has a well developed public library network. This includes the only legal deposit library, the Bulawayo Public Library.(BPL) The BPL runs a very successful mobile library and a historical library which has all the copies of Zimbabwean newspapers etc. There is also a network of Bulawayo Municipal libraries.

- Bulawayo has a capacity to house extra staff and a number of hotels to accommodate visiting staff and temporary manpower.

- There are a number of commercial printers in the city, one of

which is known to be operating below capacity at the moment due to lack of work.

- The Jairos Jiri Association ( a non-govenmental association which looks after disabled people) has its headquarters and a large centre and compound in Bulawayo.

This support infrastructure is regarded as important to a successful distance education system. It may be possible for the institute to plan for a target student population of about 6,000 - 10,000, with a possibility of expansion, in collaboration with SADCC, UNESCO and international organisations.

The main disadvantage with Option C is that it is still dual mode, and as such the numbers of students will be limited. But at the moment Zimbabwe may not need thousands of graduates. Starting a new Institute may be very expensive in the short term, but more effective in the long term. However, if a broader based distance education system is required, then an Open University style may be considered. Since there is a plethora of literature of this type of university, we shall consider this option only very briefly.

## Option D: Knowledge Is Power University (KIPU).

Option D calls for the introduction of a fully fledged open university. The name does not matter much, but it strikes the author that " The Knowledge-is-power university" or "The Learning-does-not-end university" would be interesting names. This is because these slogans are very popular with educational

institutions which work with adults in Zimbabwe. Zimbabwe needs something which can be regarded as Zimbabwean, in order to unite the people into some common objective.

The Ministry of Education has established the Zimbabwe Institute of Distance Education (ZIDE). Its main function was discussed in chapter eight. It appears as if for the time being its function is limited to monitoring private correspondence colleges. KIPU on the other hand could easily take over that responsibility.

In Zimbabwe, there are currently numerous groups interested in distance education, these include:

- Ministry of Education, Department of Non-formal education
- Ministry of Women Affairs
- Commercial colleges
- Private study groups
- Evening classes in primary and secondary schools
- Teachers' upgrading courses in colleges of education
- Public libraries (notably the BPL)
- Audio Visual Services
- Zimbabwe Broadcasting Corporation
- Commercial companies.
- Churches and women's groups
- Zimbabwe Literacy Organisation, etc.

Despite all these organisations, there is very little effective distance education. The main problem seems to be the use of poor or irrelevant materials and lack of effective student support. KIPU would be an ideal way to centralise the production of all

distance education materials for national use and focus attention on distance education.

Structure:   KIPU could adopt for example the structure of Universitas Terbuka discussed in chapter seven, University of Life, in the Philippines and the OU model discussed in numerous articles and books, (see Holmberg, (1985) Kaye and Rumble, (1982), Perry, (1976); Daniel et al, (1982) etc.) Zimbabwe appears ready to have an open university of its own.

At the time of writing, (July 1989) the government has embarked on a Z$13,000,000 education centre, to be opened in 1990, which is meant to include curriculum development and related departments like educational technology. (Sunday Mail, 21st May,1989 p.15). The author believes that amount of money could be used as starting capital for KIPU. Too much money is going to small projects which are ineffective and may need to be co-ordinated in future.

Alternatively, KIPU could adopt a flexistudy approach described by Freedman, (1982 p. 164).

Fig. 10.4 Proposed KIPU structure.
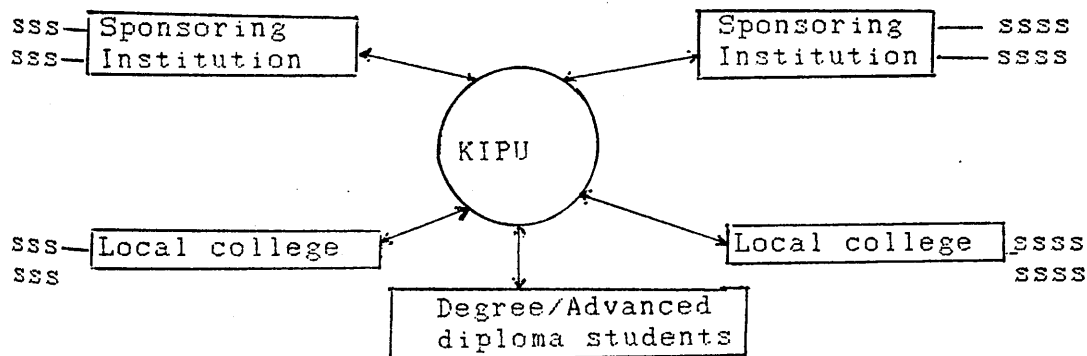


Source: Freedman (1982 p. 164) Note: sss=students

KIPU would be a very powerful institution charged with the responsibility for the production of all learning materials. It would also have the power to accredit institutions to be either local or regional centres; as well as monitor standards of associate colleges and institutions. KIPU would enforce minimum standards in order for them to be registered as associate centres. It would then be the function of the government to allow only those institutions which are associate members of KIPU to legally operate study groups or register students for distance education courses. Even though students would be registered at their local institutions for tutor support, all students would be required to register with KIPU too from where they will receive all their study materials. KIPU will also issue its own certificates in courses where national examinations are not available.

It is envisaged that local colleges and institutions will be permitted to register students for literacy, primary, secondary and some commercial courses. KIPU will maintain direct responsibility for degree and advanced diploma students, who could register with a college of their choice for support, in a similar manner as the Open College (1987) in the United Kingdom.

KIPU would also co-ordinate and serve as an intermediary for all students wishing to take courses from SADCC or other Commonwealth universities. There must be a particular interest in Zimbabwean UNISA students. Initially, KIPU may take over the co-ordination of Unisa examinations centres within Zimbabwe. Since the UNISA standards are well known within Zimbabwe, Unisa students should

be encouraged to register with KIPU and carry their credits with them. A way could be worked out which could benefit these students, and a period of about five years could be allowed for students to switch over if they wanted. There is evidence that most Zimbabweans studying with UNISA are working towards the attainment of B.A. arts , B.Admin and M.Ed degrees. These are courses which can easily be offered by KIPU in association with UZ. The University of Zimbabwe should be left free to have part-time students, if it so desires, but any further expansion should be curtailed as UZ courses could well be co-ordinated through KIPU.

KIPU would also have the usual research and consultancy function and a department for disabled students, which most Open Universities now tend to develop. It would also serve as the focus for all regional and international cooperation. It could well utilise model 10 (p. 4-9) proposed by Jevons (1986). In this model as was discussed in chapter seven, all nine SADCC countries develop their own distance education systems but they share course production and other expertise. A slight modification to Jevons et al's proposal is that KIPU will not have traditional full-time courses. In this model, use of a variety of available media becomes possible, bearing in mind the fact that students prefer books and find them to be the most effective tool for their studies.

Location:
Bulawayo could be the best location for a distance education university, but it has already won the second full-time

university. As such a more central location for KIPU would be Gweru, which is a city halfway between Harare in the north and Bulawayo in the South. It also has an excellent communications infrastructure.

Gweru has two teachers' colleges, one primary and the other one, is one of the best secondary teachers' colleges in the country. Established in 1963, as a quality teachers college for blacks, Gweru Teachers College has now established itself as a leader in teacher education. Mkoba Teachers College has had experience as a ZINTEC regional centre, so its experience and the provision of support staff may prove vital. But Chivore, (1986) points out that Mkoba Teachers college has lost, mainly through promotion, about 70% of its staff, who would by now have had experience in distance education. As such, not much reliance should be placed on KIPU getting quality support staff from Mkoba Teachers college, though the author would be pleasantly surprised to find out that the situation has improved.

Gweru is located just about 20 km from the industrial town of Que Que, which now has a technical college; which may prove to be very valuable not only as a local college but in providing support staff. The only steel works manufacture in Zimbabwe and the largest chemical factory are also located in Que Que.

Gweru is strategically placed, as there are railway lines and good road and courier service to all parts of Zimbabwe. It is also the nerve centre of Zimbabwe's modern telephone and communications network, this may prove useful if the KIPU decides

to use the telephone for instructional purposes. Mambo Press, a very successful publishing company is also based in Gweru. With enough goodwill, KIPU can be an excellent alternative for Zimbabwe. It will have the advantage that it will be big and powerful and therefore capable of benefiting from regional and international cooperation, rather than be subdued by international institutions.

Conclusion:

As we said earlier, there are no absolutes in distance education, the alternatives for a Zimbabwean Model are numerous. The model developed or selected should be politically and economically acceptable. Zimbabwe seems to be at a critical crossroads where either a dual mode model or an Open University model could be selected. Dual mode can be one way of introducing variety, and can always run parallel to KIPU. The author is undecided himself, but feels that the time is ripe for Zimbabwe to make a decisive move and establish a viable and comprehensive KIPU, which will benefit the whole of Zimbabwe. Properly planned and administered KIPU can work with other SADCC countries effectively without contradicting the spirit of regional cooperation. Someone has to take the lead. There is evidence in Zimbabwe that resources are available, political will is there, the students are already crowding in study centres and libraries. Such opportunities must be seized.

# CHAPTER 11

## CONCLUSIONS

There are no absolutes in distance education systems. Distance education is inevitable in modern society for a variety of reasons outlined above. In distance education the learner and the instructor must be apart for most of the time during learning. Some form of communication other than face-to-face must also be used, for instructional and student support purposes. Communications technologies are therefore a crucial part of any distance education system. The distribution of real wealth between North and South is clearly shown in the availability of communications infrastructure to serve the needs of distance education in each of the areas of the globe.

There are three major developments which have forced the evolution of distance education:

.    the learning process;

.    appropriate ways of treating people;

.    the context in which learning will take place;

As Peters, (1982) shows, distance education is the most industrialised form of education. It calls for very sophisticated communications strategies which have been variously referred to as programmed learning, educational technology, the systems approach, etc. The systems thinking and distance education are now important disciplines of study in their own right in many universities all over the world. The use of systematic distance

education is spreading right across the globe, not least in Zimbabwe, where there is wide experience of correspondence education because of the country's history. This study has vital implications for:

. learning and motivation in social isolation;

. the role of communications and educational technology in distance education systems;

. university distance education systems generally;

. education and international cooperation;

. development of distance education in Zimbabwe;

We shall summarise the key issues relating to each of the above points.

Learning and motivation in social isolation: People differ in the methods they use for effective learning. There are also differences in their motivation and reasons for studying. If the reasons for studying are strong, students will persevere. It is vital for a distance learning system to provide some support for students, to encourage them on and to prevent premature dropout.

The students' social environment may amplify social isolation. Extroverts are less suitable for distance education but make up for their need to be with other people by creating their own learning environment and contacts. They easily find people to help them in their work wherever they are. Introverts are more disposed to studying through distance education, but tend to dropout when they face difficulties, as they are unable to create social contacts. Institutional support is vital for them.

Distance education students are usually adults between 21 and 35 years of age. On average they have about 14 hours of study time a week.

The role of communications and educational technology: There is a strong correlation between books and media regarded as being the most effective for studying at a distance. This means that despite developments in communications, print should be regarded as essential for distance education.

A developed communications infrastructure is crucial to the running of any distance education system. Satellites and computers are becoming increasingly important in international cooperation in distance education. Broadcast media and telephones should be used whenever possible for student support but should never be the only media used for instruction.

University distance education systems: There is widespread demand for university places, but there are limited resources which can be used for full-time education. A majority of adults do not want or find it impossible to attend full-time education or traditional part-time evening classes. Systematic distance education seems to be a an effective alternative.

International trends: Traditional universities can use the dual mode; there is evidence that many institutions are taking this direction. The future trends point to all traditional universities developing distance education units. Views about university lecturers are changing. Rather than being the source of knowledge, they will soon be learning facilitators.

Instruction will be through learning packages, and universities will take greater control of students' learning. The university is being demythologised and learning will be public, for anyone to acquire and purchase in required instalments.

The era of national Open Universities seems to be passing in many developed countries, in favour of international institutions and cooperation. Rather than wait until they are gobbled up, wise universities are making provision for international cooperation. The artificial gaps between full-time and distance education universities is quickly being narrowed. There is much more cooperation between different types of institutions than was previously possible. In the 21st century there may well be only one university, and current universities will be reduced to university departments. Imagine the address for UZ as being: The International University, Department: University of Zimbabwe, P.O.Box MP 167, Mount Pleasant, Harare, Zimbabwe.

Tertiary distance education in Zimbabwe: Demand for university places is far in excess of the number of places. The UZ has made tremendous efforts to provide for as many students as possible through traditional part-time education. This form of education is inadequate and very expensive to students.

Systematic distance education should be provided, either as dual mode or in the form of a new open learning university. In the long term, one institution which will be able to co-ordinate the numerous national and international organisations may prove invaluable.

Further Research:

There is evidence from this study that although much research has been done on tertiary level distance education, much still remains to be done. The areas which might be investigated as far as the University of Zimbabwe is concerned, include:

1. An assessment of staff interest in DE.

2. Effective methods of staff training in the use of DE.

3. Ways of developing relevant learning materials.

4. How to improve communication between staff and students.

5. Effective course costing procedures.

6. The effective use of existing media.

For Zimbabwe in general, further areas of research could include:

1. A broader study on Zimbabwean DE needs.

2. An analysis of DE policy within Zimbabwe.

3. An examination of the role of DE in manpower training.

4. A study to find out the quality of student support methods currently in use.

5. A detailed investigation of organisations offering DE within Zimbabwe, both private and public , including an assessment of course content, level and cost to users.

It is the business of the future to be dangerous. This calls for caution in what is selected for use in distance education. Just as there are many cultures, there will be many types of distance education systems. There are no absolutes in distance education. Cooperation should be because of mutual respect, global peace and understanding rather than on economies of scale alone. It can be done.

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Copy of questionnaire

**QUESTIONNAIRE**                                        **CONFIDENTIAL**

University of Stirling
Department of Film and Media
Stirling
FK9 4LA
Scotland   United Kingdom.

1st August 1988

Dear colleague

There is global concern about the methods to be used in increasing university places. I am a researcher who is on staff development at the above institution and I am mainly concerned with current problems in Distance Education Technology in Developing Nations.

You will be delighted to know that you are one of the few people who have been randomly selected to express their views on a subject that is becoming increasingly vital in the development of our country: democratising higher education through Open learning.

Distance Education or Open Learning as it is now commonly known, has developed from learning by correspondence. Even though Open Learning is one way of democratising higher education for people like yourself, it is recognised that learning in this way has its own pitfalls. What these problems are and the extent to which they affect learning and peoples' lives in various cultures is not yet fully known. The questionnaire below attempts to address some of these problems. I am therefore requesting you to give your views on this important issue.

Please fill in the questionnaire as fully as you can and send it to: THE CHAIRMAN, CENTRE OF EDUCATIONAL TECHNOLOGY, at the University of Zimbabwe; clearly marked "**MULTI-MEDIA DET SURVEY**" In order to ensure that your comments are incorporated into our findings, please return the questionnaire within a week of receipt.

All your comments will be treated in the strictest confidence and will only be used for this study.

Thank you very much for your co-operation, I wish you every success in your studies.


Yours sincerely

Bhekimpilo Khumbula Sibanda. MITD, B.Ed, M.Litt.
[Staff Development Fellow, CET, UZ]

1

## I. GENERAL

1. (a) Please tick               Male _____     Female \_\_\_\_\_
   (b) Marital status,           Married \_\_\_    Single \_\_\_\_\_

   (c) How many children have you got?      _____
   (d) How old are your children? _____

   (e) Which is your age group? (Tick)     Under 21 yrs \_\_\_\_
                                        21 - 35   "  \_\_\_\_\_
                                        36 - 45   "  \_\_\_\_\_
                                        46 - 55   "  \_\_\_\_\_
                                        Over 56   "  \_\_\_\_\_

   (f) What are your current qualifications? _____
   _____

   (g) Which programme are you currently registered for at the University of Zimbabwe? _____

   (h) Please list all the subjects you are currently studying. _____
   _____
   (i) Is your course relevant to your current job? Yes\_\_No\_\_


2. (a) What is the actual title of your current job?_____ \_
   _____

   (b) If you go out to work, what time do you normally leave home? _____
   (c) How many different jobs have you held since 1978? _____

3. When do you have your lunch break?   (a) Between 12.00-1.00
                                                (b)   "    1.00-2.00
                                                (c)   Varies _____

4. (a) What time do you normally get home after work? _____
   (b) Where do you live? ( name the district or town where you actually reside most of the time) _____

5. (a) Do you have space available at home where you can study quietly if you wish? Yes \_\_ No

   (b) Do you have a planned study timetable?    Yes \_\_\_No\_\_\_

   (c) Have you studied by correspondence/ Open Learning before?                  Yes\_\_\_No\_\_\_

   (d) When did you last study for a formal examination? \_\_\_\_

6. Please estimate the actual time you spend
   studying  per day.

| Day | Time in  hrs |
|-----|--------------|
| Sunday | _____ |
| Monday | _____ |
| Tuesday | _____ |
| Wednesday | _____ |
| Thursday | _____ |
| Friday | _____ |
| Saturday | _____ |
| Total | _____ |

II.   MEDIA AND MATERIALS:

7. (a) Where do you get most of your textbooks from?_____
   (b) Were you able to get prescribed books for your
       course?                    all___ a few___none___

8. Please list all the libraries you use for
   your studies._____ _____ _____
   _____ _____ _____

9. How easy is it for you to get to a library
   to borrow books?                Very easy     _____
                                   Fairly easy _____
                                   Not very easy ____
                                   Not possible at all___

10. If you find it impossible to borrow
    books from a library, what is the problem? _____
    _____

11. Do you have electricity at home?     Yes ___ No ___

12. If you have no electricity, can you get
    batteries?         All the time ___ Sometimes___ Not at all_

13. Which of these media do you have easy access to?
                                   a)   Radio  FM __ MW__ SW__
                                   b)   Television ___
                                   c)   Cassette recorder ___
                                   d)   Typewriter _____
                                   e)   Video recorder ___
                                   f)   Computer ____
                                   g)   Books _____

14. Which of the above mentioned media do you use for your
    studies at the moment? _____
    _____

15. Which media do you find most useful in your
    studies? _____

3

16. How good is your radio and television reception?

| | TV Channel 1 | 2 | Radio 1 | 2 | 3 | 4 |
|---|---|---|---|---|---|---|
| very good | -- | -- | -- | -- | -- | -- |
| good | -- | -- | -- | -- | -- | -- |
| average | -- | -- | -- | -- | -- | -- |
| Poor | -- | -- | -- | -- | -- | -- |
| very poor | -- | -- | -- | -- | -- | -- |

17. If it were possible, would you prefer to
    listen to television/radio broadcasts live
    or would you use pre-recorded programmes as part
    of your studies?          Live ___  Recorded ___ Both ___


18. Which would be the most convenient days and times for
    live broadcasts for you?        Day        Time    Channel

    TV      _____    _____   _____
    Radio   _____    _____   _____

19. About how often do you usually watch/listen
    to TV and radio?                        Television    Radio

    a)   Everyday                    _____      _____
    b)   5 - 6 days                  _____      _____
    c)   3 - 4                       _____      _____
    d)   1 - 2                       _____      _____
    e) Varies( difficult to say) _____      _____
    f) Not at all                    _____      _____

20. What type of television/radio programmes
    do you like?                            Television    Radio

    News          _____    _____
    Sports        _____    _____
    Drama         _____    _____
    Films         _____
    Music         _____    _____
    Other(specify) _____    _____

21. Which is the best method to send urgent course
    information to you?
          a) By radio _____(Specify station) _____
          b) Newspaper_____  (which one) _____
          c)Other (specify) _____


III. SUPPORT:

22. What sort of study materials do you
    receive from the University?   a)   Study guides _____
                                   b)   Course Units _____
                                   c)   Course notes _____
                                   d)   Books         _____
                                   e)   Audio cassettes _____
                                   f)   Other(specify) _____

                                   _____

                                   g)   None          _____


4

23. How often do you meet your subject tutors? _____

24. Do you have a personal tutor?    Yes __ No __ Don't know __

25. Who do you contact if you have a problem .
    related to your studies?  Personal Tutor ___  Subject Tutor_
                                No one ___   Other _____

26. How many times a year do you have to attend at the
    University for classes? _____

27. What is the total number of days per year do you spend
    on residential study? _____

28. Do you find these face-to-face encounters: very useful___
                                                useful     ___
                                                Not useful ___

29.   Would   you   prefer   that   residential   periods   were:
                                          Shorter _____
                                          Longer _____
                    not included in the course    _____

30. What do you think is the most suitable length for
    these residential periods? _____

31. What should be the main purpose of residential
    study sessions?          a) learn new ideas  _____
                             b) Meet other students _____
                             c) Clarify what you have read ___
                             d) Other reasons _____

IV INFRASTRUCTURE:

32. Do you have someone to help you in your work
    near your home or at work?   Yes ____ No ___

33. If it were possible, would you find a study centre:
                              Very useful  ____
                              Useful       ____
                              Not useful   ____

34.  How would you would use the study centre?  _____
    _____

35.  Some countries use Mobile Study Centres, do you think that
     this could be a suitable method in your course? Yes _ No__

36. a) Would you use the mobile Centre regularly?  Yes __ No__

    b) If you were to use the Mobile centre, what would you use
       it for? _____

37. How long does a letter take to reach you from the University?_____

38.  What is the distance from where you live to the University?_____

39. What is the cheapest form of transport from your home to the nearest town? _____

40. How far is your nearest Post Office? _____

41. Have you got a telephone?  a) at home. Yes ___ No __
                                b) at work. Yes ___ No __

42. If not, how far is the nearest public telephone? _____


V COSTS

43. What is the annual cost of your studies?
                              a) Fees  $ _____
                              b) Transport   _____
                              c) Accommodation _____
                              d) Books/Materials _____
                              e) Subsistence   _____
                              f) Other     _____

44. Please estimate what you think will be the
    total cost of your studies if your course is more
    than one year.              _____

45. Do you get help from your employer or any other
    source in financing your studies?  Yes____   NO____

46. If you are receiving any financial assistance to pay
    for your studies, please state the source. _____


V. REASONS FOR STUDYING.

47. What is the most important reason for you
    to study in this way? (tick one only)
                              a) to get a job  _____
                              b) Promotion _____
                              c) to change to another job _____
                              d) to improve salary in the same job___
                              e) Just for interest _____
                              f) Other (specify) _____

48. If you feel like giving up your studies sometimes, what do you do to gain confidence ?

    a) talk to other students ____
    b) suspend studying for a while _____
    c) telephone your tutor_____
    d) talk to members of your family____
    e) other (specify) _____

---

49. Which of the factors listed below is most likely to force you to discontinue with your studies? (tick one only)

    a) family matters _____
    b) finance _____
    c) Difficult subject matter _____
    d) Lack of feedback from tutor _____
    e) Other (specify)_____

50. When did you last write a formal examination? _____

51. How is your current course(s) assessed?

    a) assignments plus examination___
    b) examination only_____
    c) other (specify) _____

---

52. If you had a choice, would you prefer:
a) One final examination at the end of your course instead of assignments?_____
b) Regular assignments instead of an examination?_____
c) Both assignments and an examination?_____
d) Different examinations from full-time students? _____
e) The same examinations as full-time students? _____

53. If you were to advise an unemployed school leaver intending to study part-time like yourself, what would you say is one of the most difficult problems she/he will face?_____

---

54. I may have left out what you consider to be an important question on the subject of Open learning, or you may have a question about distance education, please write it below, continue on the back page if necessary. _____

---

Thank you very much for your assistance. Please forward your filled in questionnaire as soon as possible to:

THE CHAIRMAN (DR.JOHN RWAMBIWA)
(MULTI-MEDIA DET SURVEY)
CENTRE FOR EDUCATIONAL TECHNOLOGY
UNIVERSITY OF ZIMBABWE
P.O.BOX MP167
MOUNT PLEASANT. HARARE.

<u>QUESTIONNAIRE</u>

## I  GENERAL

1. (a) Please tick          Male _____        Female _____

   (b) Marital Status      Married _____      Single _____

   (c) How many children have you got? _____

   (d) Which is your age group?      Under 21 Yrs _____
                                        21 - 35 " _____
                                        36 - 45 " _____
                                        46 - 55 " _____
                                        Over 56 " _____

   (e) What are your current qualifications _____

2. If you go out to work, what time do you normally leave home in the morning? ___
_____

3. When do you have your lunch break? (a) between 12.00 - 1.00 _____
                                          (b) between  1.00 - 2.00 _____
                                          (c) any other time _____

4. (a) What time do you normally get home
        from work in the evening? _____
   (b) Where do you live?      Town _____      Rural District _____
   (c) Which degree/diploma/certificate programme are you registered for? _____
_____

.5. Is your course relevant to your current job? YES _____      NO _____

(b) Please estimate the actual time you spend
    studying per day.

| Day | Time in Hrs&mins |
|-----|-----|
| Sunday | _____ |
| Monday | _____ |
| Tuesday | _____ |
| Wednesday | _____ |
| Thursday | _____ |
| Friday | _____ |
| Saturday | _____ |

6. (a) Do you have space available at
       home where you can study quietly if
       you wish?                    YES _____      NO _____

   (b) Do you have a planned study
       timetable                     YES _____      NO _____

   (c) Have you studied by distance/
       correspondence education before   YES _____      NO _____

7. What is the actual title of your job? _____

   (b) How many jobs have you held in the past ten years _____

## II MATERIALS AND MEDIA:

8. (a) Where do you get most of your books from? _____

   (b) Were you able to get prescribed books
       for your course?  All ____  Few_____  None_____

9. How easy is it for you to get to a
   library to borrow books?

   Very easy _____
   Fairly easy _____
   Not very easy _____
   Not possible at all _____

10. Please list all the libraries you
    use for your studies _____  _____  _____

11. If you find it not very easy to
    get to a library or borrow books,
    please tell me why _____

12. Do you have electicity at home?  YES _____      NO _____

13. Which of these do you have easy
    access to?

    (a) Radio FM _____ SW _____
    (b) Television _____
    (c) Cassette recorder _____
    (d) Typewriter _____
    (e) Video recorder _____
    (f) Computer _____

14. Which of the above media do you
    use for your studies at the moment
    e.g (Tape recorder) list _____  _____  _____

    (b) Which media do you find useful for your studies? _____

15. If it were possible, would you prefer to listen to
    television or radio broadcasts live or in recorded
    form, as part of your studies?  Live _____  Recorded _____ Both ___

16. Which would be the most convenient days
    and times for the broadcasts for you:
    list times suitable e.g (1.00 - 2.00)  Weekdays/Day/Time    Weekends/Day/Time

    _____    _____
    _____    _____

17. Not counting today, about how many hours did you
    spend (a) watching television (b) listening to the
    radio during the past week? (please estimate, if you have no radio or
    T.V skip the question.)       T.V          Radio

    ____          ____
    ____          ____

18. What type of television/radio
    Programmes do you prefer?        T.V          Radio
              Sports programmes      ____         ____
              News bulletins         ____         ____
              Drama/PLays            ____         ____
              Music                  ____         ____
              Comedy                 ____         ____
              Religious Programmes   ____         ____
              Adult Education        ____         ____
              Serious talks          ____         ____
              Other _____

19. About how often do you usually
    watch T.v/listen to the radio   T.V          Radio
              Everyday               ____         ____
              5 - 6 days a week      ____         ____
              3 - 4  "   "   "       ____         ____
              1 - 2  "   "   "       ____         ____
              Less than once a
              week                   ____         ____
              Varies, difficult
              to say                 ____         ____

20. Which daily and weekend papers do
    you look at or read?            Chronicle  _____
                                    Herald     _____
                                    Sunday News _____
                                    Sunday Mail _____
                                    Finacial Gazzette _____
                                    Other _____

III SUPPORT:

   21. What sort of study materials so you receive
       fom the University?          Study guides   _____
                                    Course Units   _____
                                    Course notes   _____
                                    Books          _____
                                    Cassettes      _____
                                    Other          _____
                                    None           _____

22. Do you have regular contact
    with your Tutors?               YES _____      NO _____

23. Do you know who your personal
    tutor is?                       YES _____      NO _____

24  Who do you contact if you have
    a problem related to your studies
    at the University?              Personal Tutor _____
                                    Subject Lecturer _____
                                    Other          _____

25. How many (a) times per year do
    you have to attend at the
    University? _____

25. (b) What is the total number of days do
        you spend on residential study? _____

26. Do you find these residential periods
    useful?                              YES _____        NO _____

27. Would you prefer that residential
    periods be                           (a) Shorter _____
                                         (b) Longer _____
                                         (c) How long would be the most
                                             suitable residential period
                                             for you? _____

28. What do you think should be the purpose
    of your face-to-face contacts with
    your Lecturers?                      (a) Learn new ideas _____
                                         (b) Clarify what you
                                             have already read _____
                                         (c) Other _____

29. Do you have someone to help you in
    your work, near your ............    (a) Home _____
                                         (b) Work place _____
                                         (c) Nobody _____

## IV INFRASTRUCTURE:

30. If it were possible, would you prefer that
    there was a University Study Centre
    accessible from..................    (a) Home _____
                                         (b) Work _____

31. How would this Study Centre help you in your studies? _____

32. An alternative to a study centre,
    would be mobile, which would have
    a planned route.                     (a) Would you use the mobile centre? ____
                                         (b) What materials would you want
                                             the mobile centre to carry _____
                                             _____

33. Does your mail get to you from the
    University within:                   1 - 2 days  _____
                                         3 - 4 days  _____
                                         5 - 6 days  _____
                                         A week      _____
                                         More than a week - specify
                                         time _____

34. Tick any form of transport easily
    accessible to you, from your home    Train _____
                                         Buses _____
                                         Plane _____
                                         Other _____

35. How far is your nearest Post Office? _____

36. How good is your radio and television reception?

|  | T.V | Radio |
|---|---|---|
| Good | ___ | ___ |
| Not so good | ___ | ___ |
| Poor | ___ | ___ |

37. Have you got a telephone?    (a) at home _____
                                  (b) at work _____

38. If not, how far is your nearest telephone? _____

## V COST

39. What is the cost of your studies?

    (a) Fees                        _____
    (b) Travel                      _____
    (c) Accommodation               _____
    (d) Books/materials             _____
    (e) Subsistance while on
        residential periods         _____
    (f) Other _____
        Total per year              _____

40. What will be the total cost of your
    studies (estimate) if your course is
    more than one year    _____

41. Do you get help from your employer or
    any other source with fees?    YES _____    NO _____

42. If you had a choice, would you
    prefer                          (a) One final examination at the end of your
                                        course? _____
                                    (b) Regular assignments?  _____

43. If you were to advise a school leaver proposing to study part-time like yourself,
    what would you say is one of the most difficult problems he/she will have to face

    _____

    _____

44. What is the most important reason for you to
    study in this way? (tick only one)
                                    (a) to get a job _____
                                    (b) promotion    _____
                                    (c) to change to another job ___
                                    (d) to improve salary in same job _____
                                    (e) just for interest _____
                                    (f) other reason  _____

45. You may have an important question you want to ask me related to Distance
    Education, please write your question in the space provided below.

    _____

    _____

Thank you very much for your assistance.    Please forward your filled in questionnaire
as soon as possible to:

    THE CHAIRMAN (Dr John Rwambiwa)
    CENTRE FOR EDUCATIONAL TECHNOLOGY
    UNIVERSITY OF ZIMBABWE
    P.O Box MP167
    MOUNT PLEASANT

1)

*I am a post graduate student ...*

University of Stirling
Department of Film & Media
Stirling
FK9 4LA
SCOTLAND
U.K

1 August 1988

Dear Colleague
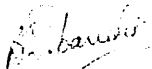
→ +

You will be delighted to know that you are one of the few people who were randomly
selected to express their views on a subject that is becoming increasingly vital in
the development of our country; democratizing higher education through Open Learning

Distance Education or Open Learning as it is now commonly known, developed from
correspondence learning. Even though Open Learning is one way of democratizing high
education for people like yourself, it is recognised that learning in this way has
its own pitfalls. What these problems are, and the extent to which they affect
learning and peoples' lives is not yet known. The questionnaire attached attempts
to raise some of those problems. I am therefore requesting you to give your views
on this important issue.

Please fill in the questionnaire as fully as you can and send it to the Centre of
Educational Technology at the University of Zimbabwe (CET) as soon as you can. In
order to ensure that your comments are not left out, please return the questionnaire
within a week of receipt.

Thank you very much for your co-operation, I wish you every success in your studies.

Yours sincerely

Bhekimpilo Khumbula Sibanda (Staff Development Fellow CET)  KITD, B.Ed, M.Lit.

QUESTIONNAIRE

University of Stirling
Department of Film and Media
Stirling
FK9 4LA
Scotland  United Kingdom.

1st August 1988


Dear colleague

There is global concern about the methods to be used in increasing university places. I am a researcher at the above institution mainly interested in finding out current problems in Distance Education Technology in Developing Nations.

You will be delighted to know that you are one of the few people who were randomly selected to express their views on a subject that is becoming increasingly vital in the development of our country: democratizing higher education through Open learning.

Distance Education or Open Learning as it is now commonly known, has developed from learning by correspondence. Even though Open Learning is one way of democratising higher education for people like yourself, it is recognised that learning in this way has its own pitfalls. What these problems are and the extent to which they affect learning and peoples' lives in various cultures is not yet fully known. The questionnaire below attempts to raise some of these problems. I am therefore requesting you to give your views on this important issue.

Please fill in the questionnaire as fully as you can and send it to "THE CENTRE OF EDUCATIONAL TECHNOLOGY" at the University of Zimbabwe. In order to ensure that your comments are not left out, please return the questionnaire within a week of receipt.

Thank you very much for your co-operation, I wish you every success in your studies.


yours sincerely


Bhekimpilo Khumbula Sibanda, MITD, B.Ed, M.Litt
[Staff Development Fellow, CET UZ]

# I. GENERAL

1. (a) Please tick            Male _____     Female _____
   (b) Marital status,         Married ___     Single _____
   (c) How many children have you got? _____
   (d) Which is your age group? (Tick)    Under 21 yrs _____
                                           21 - 35   " _____
                                           36 - 45   " _____
                                           46 - 55   " _____
                                           Over 56   " _____
   (e) What are your current qualifications? _____
   (f) Which programme are you currently registered for at the University of Zimbabwe? _____
   (g) Is your course relevant to your current job? Yes__No__

2. (a) What is the actual title of your current job?_____ _
   (b) If you go out to work, what time do you normally leave home? _____
   (c) How many different jobs have you held since 1978? _____

3. When do you have your lunch break? (a) Between 12.00-1.00
                                               (b)    "        1.00-2.00
                                               (c)    Varies _____

4. (a) What time do you normally get home after work? _____
   (b) Where do you live? Town _____ Rural District

5. (a) Do yo have space available at home where you can study quietly if you wish? Yes __ No___
   (b) Do you have a planned study timetable? Yes ___No___
   (c) Have you studied by correspondence/ Open Learning before? Yes___No___

6. Please estimate the actual time you spend studying per day.

   | Day | Time in hrs |
   |-----------|-------------|
   | Sunday | _____ |
   | Monday | _____ |
   | Tuesday | _____ |
   | Wednesday | _____ |
   | Thursday | _____ |
   | Friday | _____ |
   | Saturday | _____ |

# II. MEDIA AND MATERIALS:

7. (a) Where do you get most of your textbooks from?
   (b) Were you able to get prescribed books for your course?          all    a few    none

8. Please list all the libraries you use for your studies._____ _____ _____
   _____ _____ _____

9. How easy is it for you to get to a library
   to borrow books?                          Very easy     _____
                                             Fairly easy   _____
                                             Not very easy ____
                                             Not possible at all___

10. If you find it not very easy to get
    to a library, can you say why?   _____

11. Do you have electricity at home?     Yes ___ No ___

12. If you have no electricity, can you get
    batteries?         All the time ___ Sometimes___ Not at all_

13. Which of these media do yo have easy access to?
                                 Radio   FM __ MW__ SW__
                                 Television ___
                                 Cassette recorder ___
                                 Typewriter _____
                                 Vedeo recorder ___
                                 Computer ____
                                 Books _____

14. Which of the above mentioned media do you use for your
    studies at the moment? _____

15. Which media do you find most useful to your
    studies? _____

16. How good is your radio and television reception?
                     TV Channel 1  2   Radio 1  2  3  4
         very good        --  --        --  -- -- --
         good             --  --        --  -- -- --
         average          --  --        --  -- -- --
         Poor             --  --        --  -- -- --
         very poor        --  --        --  -- -- --

17. If it were possible, would you prefer to
    listen to television /or radio broadcasts live
    or would you use pre-recorded programmes as part
    of your studies?         Live ___ Recorded ___ Both ____

18. Which would be the most conveniet days and times for
    live broadcasts for you?     Day        Time     Channel
                         TV    _____   _____   _____
                         Radio _____   _____   _____

19. About how often do you usually watch/listen
    to T.V and radio?                   Television     Radio
                         Everyday          _____      _____
                         5 - 6 days        _____      _____
                         3 - 4             _____      _____
                         1 - 2             _____      _____
                         Varies difficult to say _____ _____
                         Not at all        _____      _____

20. What type of television/radio programmes
    do you like?                                      Television    Radio
                                    News             _____      _____
                                    Sports           _____      _____
                                    Drama            _____      _____
                                    Films            _____      _____
                                    Music            _____      _____
                                    Other            _____      _____

21. If urgent information about your course
    were to be placed in a newspaper, in which
    one are you most likely to see it ?  a) Newspaper_____
                                          b) Day      _____

III. SUPPORT:

22. What sort of study materials do you
    receive from the University?        Study guides  _____
                                        Course Units  _____
                                        Course notes  _____
                                        Books         _____
                                        Audio cassettes _____
                                        Other  _____
                                        None          _____

23. How often do you meet your subject tutors? _____

24. Do you have a personal tutor?   Yes __ No __ Don't know __

25. Who do you contact if you have a problem
    related to your studies?  Personal Tutor ___ Subject Tutor_
                              No one ___   Other _____

26. How many times a year do you have to attend at the
    University? _____

27. What is the total number of days per year do you spend
    on residential study? _____

28. Do you find these face-to-face periods: very useful __
                                            useful       ___
                                            Not useful   ___

29. Would you prefer that residential periods were:
                                    Shorter _____
                                    Longer  _____

30. What do you think is the most suitable length for *these*
    residential periods per session? _____

31. What should be the main purpose of residential
    study sessions?        a) learn new ideas   _____
                           b) Meet other students _____
                           c) Clarify what you have read ___
                           d) Other reasons _____

4

## IV INFRASTRUCTURE:

32. Do you have someone to help you in your work
    near your home or at work?   Yes ____ No ___
    b) *Other students*

33. If it were possible, would you find a study centre:
                                    Very useful   ____
                                    Useful        ____
                                    Not useful    ____

34. Please comment on how you would use the study centre?
    _____

35. Some countries use Mobile Study Centres, do you think that
    this could be a suitable method in your course? Yes _ No__

36. a) Would you use the mobile Centre regularly?   Yes __ No__
    b)  If you would use the Mobile centre,  what would you use
        it for? _____

37. How  long  does  a  letter  take to  reach  you  from  the
    University?_____

38.  What  is  the  distance  from  where  you  live  to  the
    University?____

39.  What  is the cheapest form of transport from your home  to
    the nearest town? _____

40. How far is your nearest Post Office? _____

41. Have you got a telephone?  a) at home. Yes ___ No __
                               b) at work. Yes ___ No __

42. If not, how far is the nearest telephone? _____

## V COST

43. What is the annual cost of your studies?
                               a) Fees  $ _____
                               b) Transport  _____
                               c) Accommodation _____
                               d) Books/Materials _____
                               e) Subsistance   _____
                               f) Other    _____
                                  Total _____

44. What will be the total cost of your studies if
    your course is more than one year? $ _____

45. Do you get help from your employer or any other
    source in financing your studies? Yes __  No__

46. Please comment on the nature of the financial help you receive. _____

47. What do you think is the most important reason why you are studying in this form? (tick one only)
                                a) to get a job ___
                                b) Promotion ____
                                c) to change to another job __
                                d) to improve salary in same job_
                                e) Just for interest _____
                                f) other reason _____

48. If you had a choice, would you prefer:
    a) One final examination at the end of your course instead of assignments?_____
    b) Regular assignments instead of an examination?_____
    c) Both assignments and an examination?_____
    d) Different examinations from full-time students? _____
    e) The same examinations as full-time students? _____

49. If you were to advise an un-employed school leaver intending to study part-time like yourself, what would you say is one of the most difficult problems she/he will face?_____

50. I may have left out what you consider to be an important question on the subject of Open learning, or you may have a question about distance education. please write your question on the space provided below. _____
_____

Thak you very much for your assistance. Please forwad your filled in questionnare as soon as possible to:

            THE CHAIRMAN (DR.JOHN RWAMBIWA)
            CENTRE FOR EDUCATIONAL TECHNOLOGY
            UNIVERSITY OF ZIMBABWE
            P.O.BOX MP167
            MOUNT PLEASANT
            HARARE

Letter from registrar

P.O. Box MP 167
Mount Pleasant
HARARE
Zimbabwe

Telegrams: "UNIVERSITY"
Telephone: Harare 303211

# University of Zimbabwe

14 March

Mr B Sibanda
University of Stirling
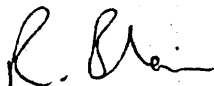Department of Film and Media
FK9 4LA    STIRLING
Scotland

Dear Mr Sibanda

MULTIMEDIA UNIVERSITY DISTANCE EDUCATION:    PRACTICAL RESEARCH

Your letter dated 23 February 1988 refers.

I confirm that it would be possible to give you a computer printout of all
University of Zimbabwe part-time programmes and a listing of students
registered for them.   However, the University Administration cannot conduct
your research for you nor can it be of assistance in mailing questionnaires to
members of staff, etc.   I would suggest that you liaise with the Chairman of
your department at this University (The Centre for Educational Technology) to
see if the resources of that department can be of assistance to you in
facilitating your research here.   Perhaps, after you have liaised with the
Chairman, the Department could contact the Deputy Registrar (Academic) for the
list of part-time programmes and part-time students.

Yours sincerely

R D D BLAIR
REGISTRAR

cc  Chairman, Department of Educational Technology
    Deputy Registrar (Academic)
    Senior Assistant Registrar (Staff Development & Training)

# FernUniversität
Gesamthochschule

## ZIFF

Zentrales Institut
für Fernstudienforschung

Der Geschäftsführende Direktor

Bhekimpilo K. Sibanda, Esq.
University of Stirling
Department of Film and Media
Stirling FK9 4LA
Scotland

Prof. Dr. Dr. h. c. Börje Holmberg

Großbritannien

Märkischer Ring 101
D-5800 Hagen

| Ihr Zeichen/Schreiben vom | Mein Zeichen/Auskunft erteilt | ℃ (02331) 804- | Hagen |
|---|---|---|---|
| | H/Im | 2580 | 11 February, 1988 |

Dear Mr. Sibanda,

I look forward to meeting you on 1 March. Will it suit you to come to my office
( Humpertstr. 11 A ) at  11 a.m.? We can then talk things over and find out
what further contacts should be established for you here. I shall be returning
from abroad that very day and am afraid I shall have a fairly tight time-table
myself once I have arrived. However, I am reserving a couple of hours for you
on 1 March and will see to it that you will meet others here.

Following your request we have had a hotel room reserved for you at the
          Hotel Targan  (near the railway station in Hagen)
from the evening of 29 February. The price will be DM 40,— inclusive of continental
breakfast. Should there be any change in your plans please contact my secretary,
Mrs. A. Immler.

Yours sincerely,

B. Holmberg

# NORTHERN • COLLEGE • OF • EDUCATION

Aberdeen Campus • Hilton Place • Aberdeen AB9 1FA • Tel 0224 482341  FAX 0224 487046

Dundee Campus • Gardyne Road • Dundee DD5 1NY • Tel 0382 453433  FAX 0382 455246

———————————— Principal David A Adams MA ————————————

Visit of one day by Mr Bheki Sibanda, Stirling University, May 18th 1987

| Time | Activity | Room | Presenter |
|------|----------|------|-----------|
| 10.00 a.m. | Introduction to Department Including O.L. production. (Coffee) | C61 | T. W. Fyfe |
| 11.30 - 12.15 p.m. | Distance Learning Course Design and support | C72 | Gaye Manwaring |
| 12.15 - 12.30 p.m. | Distance Learning Administration | C62 | Sue Hain |
| 12.30 - 1.30 p.m. | Lunch | C61 | T. W. Fyfe |
| 1.30 - 2.15 p.m. | Learning Resources Facilities | B66 | I. Maclean |
| 2.15 - 2.45 p.m. | Television Suite | A23 | J. McKenzie |
| 2.45 - 3.15 p.m. | Audio Visual Media | C34 | D. Milne |
| 3.15 - 3.45 p.m. | Library Resource Centre | A2 | R. de Silva |
| 3.45 - 4.00 p.m. | Final Meeting (Tea) | C61 | T. W. Fyfe |

13.5.87

TWF/EMP

Open University programme

# THE OPEN UNIVERSITY

9 March 1988

Bheki Sibanda
Department of Film and Media
The University of Stirling
Stirling
FK9 4LA

Dear Bheki Sibanda

This letter is just to confirm that you will be coming to the Open University at Walton Hall on 16 and 17 March 1988.

Your provisional programme for Wednesday 16 March will include the following:

| | | |
|---|---|---|
| 10.00 am | - | John Deeley, Visitors Centre<br>Tape Slide Show |
| 10.45 am | - | Adrian Kirkwood, IET<br>Room 229, Geoffrey Crowther Building |
| 11.30 am | - | Tony Bates, IET<br>Room 217, Geoffrey Crowther Building |
| 2.15 pm | - | Nazira Ismail, International Centre for Distance Learning<br>Room Q229, M Block |

Additional arrangements may be confirmed on the day.

Yours sincerely

Jane Lewis
for Professor A W Bates

cc - John Deeley
     Adrian Kirkwood
     Nazira Ismail

AWB1/jlD18

# ZIMBABWE BROADCASTING CORPORATION

MBARE STUDIOS
BEATRICE ROAD
HARARE
ZIMBABWE

25th July 1988

Mr Bhekimpilo Sibanda
Department of Film and Media
The University of Stirling
Stirling FK9 4LA
Scotland

Dear Sir

## RE:  OPEN LEARNING

In reply to your inquiry of 17th July 1988:

1.  Yes, we can use the PTC Mazoe Earth Station for uplink
    and downlink;

2.  Radio Four is the ideal facility for University Courses.
    Times available could be spread between 6.00am and
    10.30pm;

3.  Yes staff can be made available for the production of
    University programmes in the disciplines that you state;

4.  Charges for Radio and Television programmes will be
    mutually agreed upon by the University and ZBC, taking
    into account the various production costs.  It is not
    possible to give an exact charge at the moment since we
    haven't gone into production yet.

5.  Reception coverage for Radio channels is 100% of the
    country, and that for television is around 40% fast
    approaching 50%

6.  The greatest problem facing the Corporation at the moment
    is money in foreign currency, for the acquisition of some
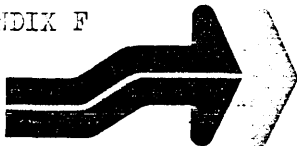    programme material, equipment and spares.

2 / ....

As far as infrastructure is concerned, the Corporation is well developed by developing country standards, and is fast developing through development of manpower resources and acquisition of new technology.

I hope the information provided is what you need.

Yours faithfully

T J Kangai
DIRECTOR GENERAL.

APPENDIX F

Correspondence from the PTC (Zimbabwe)

# Posts and Telecommunications Corporation

Our Ref: TEX 8033/88/68

29th August, 1988

Mr Ehekimpilo  Sibanda
University of Sterling
Dept of Film & Media
STERLING
FK9 4LA
Scotland

Dear Sir,

SUBJECT: ZIMBABWE'S POSTAL AND TELECOMMUNICATIONS SERVICES

I refer to your letter dated the 17th July, 1988 in which you requested
for information relating to Postal and Telecommunications facilities
in Zimbabwe and have pleasure to supply answers to the issues raised
therein.

1.0     Postal Service

    1.1 ·   Zimbabwe has an extensive Postal network distributed
        throughout the five regions of the country. Post
        office establishment are based on:

        -   government policy to provide communications services
           within easy reach of the population.

        -   recommended international standards for post office
           developments.

The total number of Postal Services centres stands at 298 as at the
end of June, 1988.

This figure includes:      175 Post Offices providing money orders;
                      savings bank, post and telegraph services

                      46 Post and Telegraph agencies

                      77 Agencies.

The Postal centres are distributed in the five regions of the country
as follows:

| Region | Number |
|---|---|
| Mashonaland | 106 |
| Matabeleland | 73 |
| Manicaland | 42 |
| Midlands | 31 |
| Masvingo | 46 |

These post office centres provide for a population  of 18 000
per post office in the urban centres and 89 000 in the rural areas.

2/........

TELINT AW 4444
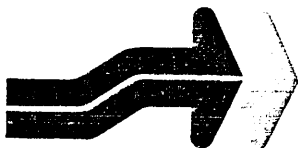
# Posts and Telecommunications Corporation

- 2 -

and a national postal service density of 44 000 per Post Office.

## 1.2  Methods of Carrying Mail

Mail ferrying between Post offices in the same urban area
is undertaken by use of PTC vans which collect and deliver
mail at scheduled times of the day throughout the week.

Interurban and rural mail is carried by public transport
contracted by the PTC. The public transport system includes
the National Railways, Swift, and rural bus operators.
International mail is carried by the national airlines.

## 2.0  Telephone Network

The country's telecommunications network is like a spiders web
of communications with strands linking together the whole
country. There are 100 telephone exchanges scattered throughout
the country serving both urban and rural areas. These exchanges
have a total capacity of 160 000 lines of which 116 00 lines
are in use. Each telephone exchange provides service to a
defined geographical area of up to 40km radius.

In this respect therefore there is no part of the country
which does not fall within an exchange area.  However the use
of telecommunications facilities are dependent on the socio-
ecomomic development of each area serviced by the exchange.
In some areas because of the low economic development and
literacy the telephone facilities provided are not fully
utilized. In others where development is turbulent the facilities
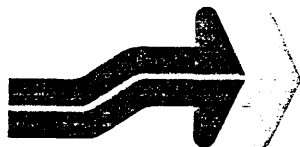are used  to capacity and are being expanded/extended to meet
growing demand.

The national telephone density is 3.38 telephones per 100
people.

## 2.2  Telephone Conferences

The existing type of equipment in the greater part of the
network is of the older type which does not provide for such
services as Telephone Conferences. However the new type
digital exchanges being installed to replace the old type
equipment are capable  of providing telephone conferences
e.g. Gweru International exchange has such facilities but are
not open to public use at present. It is hoped that through
time and and the digitalisation of the whole network and
public demand such facilities will be provided.

## 3.0  Satellite Communications

3.1  Zimbabwe is linked with the international world through
an earth satellite station. The earth station provides
connectivity through the Atlantic Ocean region satellite.

3/...........

QUARTERS
x 8061
ay, Zimbabwe
on Avenue

Telephone: National (10) 728811
International 263 0 728811
Telex: 4821 PTCHQ ZW
Telegraph: POSTGEN HARARE
Facsimile: National (10) 731989
International: 263 0 731989

# Posts and Telecommunications Corporation

It is planned to establish a second antenna which will operate through the Indian Ocean satellite.

3.2  Within the sub-region it is planned to establish a regional inter-connectivity satellite communication system to service both regional and national communication network.

3.3 Within the country itself Television Receive Only Satellite antennae are licenced to enable those who can afford to acquire the dishes  receive television programmes via satellite.

It can  be seen from the foregoing that Zimbabwe is not lagging behind in providing communication facilities. Much is being done to develop a communications infrustructure that will provide both Postal and telecommunications facilities within easy reach of the population.

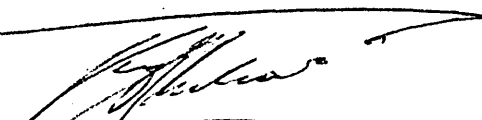4.0  PTC Annual Report

Our annual report for the previous year has not yet been published. However your request for a copy has been noted and a copy will be mailed to you when available.

Hoping you find the response provided of assistance in your research work and should  you need further assistance do not hesitate to contact us.


Yours faithfully,


V.S. Chikovah
for
POSTMASTER GENERAL


VSC/dps

# NATIONAL FREE LIBRARY OF ZIMBABWE

In reply please quote:

Correspondence from the National free library

Librarian:
D.E. BARRON, B.A. A.L.A.

Telephone: 69827/62359
Telex: 3123

Dugald Niven Library
Twelfth Avenue
South Park
P.O. Box 1773
BULAWAYO

12th November 1987

Mr B. Sibanda
University of Stirling
Dept. of Film and Media
Stirling FK9 4LA
United Kingdom.

Dear Mr Sibanda,

Thank you for your postcard.

Our total membership for our last financial year, ie. 1st July 1986
to 30th June 1987, was 27 750.

We do not break it down into country and urban. I include the
breakdown that we do make and hope that this will serve some
purpose for you.

I look forward to hearing from you when you have made further
progress.

Yours sincerely,

Librarian.

encls:

# NATIONAL FREE LIBRARY OF ZIMBABWE

## BORROWERS

| | Personal | | Libraries | | Other Institutional | | Total | |
|---|---|---|---|---|---|---|---|---|
| | 1986 | 1987 | 1986 | 1987 | 1986 | 1987 | 1986 | 1987 |
| lawayo districts | 1 082 | 1 306 | 14 | 22 | 4 | 4 | 1 100 | 1 332 |
| egutu | 98 | 112 | - | - | - | - | 98 | 112 |
| inhoyi | 161 | 188 | 2 | 2 | 2 | 2 | 165 | 192 |
| eru | 872 | 1 009 | 12 | 12 | 14 | 14 | 898 | 1 035 |
| are | 2 496 | 2 636 | 54 | 54 | 84 | 84 | 2 634 | 2 774 |
| loma | 245 | 329 | 2 | 2 | 2 | 2 | 249 | 333 |
| ekwe | 362 | 389 | 9 | 10 | 5 | 5 | 376 | 404 |
| londera | 281 | 293 | 5 | 5 | 4 | 4 | 290 | 302 |
| vingo | 752 | 840 | 8 | 8 | 6 | 6 | 766 | 854 |
| are | 470 | 503 | 9 | 9 | 6 | 6 | 485 | 518 |
| er Centres | 1 612 | 1 931 | 27 | 27 | 39 | 39 | 1 678 | 1 997 |
| tal borrowers | 8 431 | 9 536 | 142 | 151 | 166 | 166 | 8 739 | 9 853 |
| al borrowers (lawayo city) | 14 842 | 17 688 | 8 | 9 | 154 | 110 | 15 004 | 17 807 |
| al borrowers | 23 273 | 27 224 | 150 | 160 | 320 | 276 | 23 743 | 27 660 |
| ers registered for study on library premises only | | | | | | | 100 | 90 |
| Total Library Users | | | | | | | 23 843 | 27 750 |

## APPENDIX H

Example of random numbers generated from Statigraphics

Table: WORKAREA.SAMPLES   (length = 300)

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1) 803 | ( 19) 537 | ( 37) 589 | ( 55) 147 | ( 73) 639 | ( 91) 593 |
| 2) 309 | ( 20) 529 | ( 38) 358 | ( 56) 670 | ( 74) 526 | ( 92) 564 |
| 3) 791 | ( 21) 743 | ( 39) 212 | ( 57) 684 | ( 75) 65 | ( 93) 487 |
| 4) 63 | ( 22) 724 | ( 40) 555 | ( 58) 504 | ( 76) 512 | ( 94) 593 |
| 5) 284 | ( 23) 489 | ( 41) 207 | ( 59) 97 | ( 77) 616 | ( 95) 625 |
| 6) 94 | ( 24) 566 | ( 42) 610 | ( 60) 514 | ( 78) 581 | ( 96) 43 |
| 7) 488 | ( 25) 414 | ( 43) 170 | ( 61) 593 | ( 79) 235 | ( 97) 684 |
| 8) 260 | ( 26) 191 | ( 44) 255 | ( 62) 178 | ( 80) 403 | ( 98) 188 |
| 9) 424 | ( 27) 717 | ( 45) 297 | ( 63) 147 | ( 81) 507 | ( 99) 2 |
| 10) 253 | ( 28) 196 | ( 46) 519 | ( 64) 765 | ( 82) 330 | (100) 688 |
| 11) 525 | ( 29) 123 | ( 47) 297 | ( 65) 49 | ( 83) 439 | (101) 508 |
| 12) 529 | ( 30) 151 | ( 48) 165 | ( 66) 683 | ( 84) 378 | (102) 36 |
| 13) 37 | ( 31) 120 | ( 49) 35 | ( 67) 515 | ( 85) 99 | (103) 74 |
| 14) 184 | ( 32) 586 | ( 50) 671 | ( 68) 742 | ( 86) 184 | (104) 310 |
| 15) 275 | ( 33) 84 | ( 51) 242 | ( 69) 672 | ( 87) 810 | (105) 358 |
| 16) 406 | ( 34) 143 | ( 52) 650 | ( 70) 257 | ( 88) 153 | (106) 172 |
| 17) 140 | ( 35) 142 | ( 53) 617 | ( 71) 801 | ( 89) 684 | (107) 329 |
| 18) 553 | ( 36) 253 | ( 54) 674 | ( 72) 221 | ( 90) 35 | (108) 503 |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 109) 768 | (127) 661 | (145) 334 | (163) 127 | (181) 190 | (199) 706 |
| 110) 173 | (128) 267 | (146) 195 | (164) 705 | (182) 476 | (200) 162 |
| 111) 662 | (129) 658 | (147) 417 | (165) 802 | (183) 25 | (201) 633 |
| 112) 64 | (130) 417 | (148) 448 | (166) 600 | (184) 271 | (202) 11 |
| 113) 25 | (131) 381 | (149) 132 | (167) 191 | (185) 551 | (203) 118 |
| 114) 479 | (132) 505 | (150) 498 | (168) 571 | (186) 70 | (204) 801 |
| 115) 36 | (133) 664 | (151) 785 | (169) 604 | (187) 800 | (205) 328 |
| 116) 711 | (134) 566 | (152) 656 | (170) 550 | (188) 367 | (206) 560 |
| 117) 209 | (135) 796 | (153) 775 | (171) 710 | (189) 748 | (207) 754 |
| 118) 27 | (136) 142 | (154) 643 | (172) 211 | (190) 607 | (208) 78 |
| 119) 400 | (137) 723 | (155) 795 | (173) 588 | (191) 345 | (209) 279 |
| 120) 387 | (138) 409 | (156) 789 | (174) 70 | (192) 170 | (210) 16 |
| 121) 505 | (139) 513 | (157) 375 | (175) 426 | (193) 521 | (211) 382 |
| 122) 298 | (140) 380 | (158) 352 | (176) 214 | (194) 276 | (212) 297 |
| 123) 498 | (141) 388 | (159) 484 | (177) 718 | (195) 172 | (213) 443 |
| 124) 41 | (142) 321 | (160) 698 | (178) 364 | (196) 352 | (214) 190 |
| 125) 278 | (143) 644 | (161) 724 | (179) 562 | (197) 203 | (215) 671 |
| 126) 59 | (144) 109 | (162) 396 | (180) 726 | (198) 368 | (216) 16 |

Example of part of the SPSSX programme

## FILE NAME:        DISTEDU.UNI

File handle  DISTEDU.UNI/NAME = 'DISTEDU.UNI'
Data list file = DISTEDU.UNI Records = 4
    /1  Sex   6 Marital 8 Chn 10 Avgechn 12-13 Agegr    Qualific   17
Course   19 Subjects 21 Relevent 23 Job 25 Tgowork 27 Numbjobs   29
Luch   31 Backhome 33 District 35 Studspac 37 Stimetab 39 StudcorB
41 Lastfoex 43 Studtime 45-60 Getbooks 62 Bksavail 64 Librays 66-
70 Hgetlibr 72 Probusel 74  lighthme 76 Batters 78 medaccrd 80
    /2  MedaccTV 6 MedaccsR 8 MedaccTY 10 MedaccVR 12 Medaccmp   14
MedaccBK   16   Medaused   18 Mostusmd 20 RecptTV1   22   RecptTV2   24
RecptRd1   26   RecptRd2   28 RecptRd3 30 RecptRd4   32   Broadfot   34
DaylivTV   36   TimelivT   38 Chlivebr 40 DaylivRd   42   TimelivR   44
ChanlivR   46   OftlisTV   48 OftlisRd 50   PrefprTN   52   PreprTS   54
PrefprTD 56 PrefTF58 PrefprTM 60 PrefprTO 62 PrefprRN 64 PrefprRS
66   PrefprRD 68 PrefprRM 70 PrefprRO 72 Urgetinfo 74 UrginfoN   76
StmateSg 78 StudmateSU 80
    /3  Stmatecn   6   Books 8 Audtapes 10 Stmateot   12   StmatenE   14
MectTutr   16   Perstutr 18 Conprobm 20 Timeuniv 22   Totdays   24-26
Factofac   28   LengthRP   30   Suitlegth 32 PurposeR   34   Helphm   36
Valstdcr   38   Usestudc   40 MobstdCr 42 Regusesc   44   Usemobct   46
Timelet   47   DistUniv 49-51 CheapTrs 53 Nrpostof 58   phonhome   64
Phonwork 66 Pubphone 74 Fees 75-79
    /4  Costtrpt  6-10 Costaccm 12-16 Bksmatls 18-22 Subsiste   24-27
otherexp 30-33 Totlcost 35-40 Empfnhlp 42 SourceFH 44 Rnsfstud 46
Motivatn   48   Dropout   50 FormExamw 52 Assessmt   54   Prefexam   56
Advicyth 58

Missing values:  9    Numerical 0


VARIABLE LABELS:

Sex 'sex of subject'
Marital 'married or single'
Chn 'number of children'
Avgeagchn 'average age of chn'
Agegr 'Age group of subject'
Qualiffific 'present highest qualification'
course 'current programme of study'
Subjects 'subject studied'
relevant 'course relevant to current job'
Job 'job title'
Tgowork 'Time subject goes to work'
Njobs 'Number of differrent jobs since 1978'
Lunch 'lunch break'
Backhome 'Time subject arrives home from work'
District 'district where subject lives'
Studspac 'Place for private study at home'
Stimetab 'Study timetable'
StudcorB 'Studied by correspondence before'
Lastfoex 'Date when last formal exam was written'
StudtmSu 'Time studying on Sunday'

Copy of ZBC TV and Radio programmes for the 14/08/88

## THE SUNDAY NEWS, AUGUST 14. 1988



### BULAWAYO TV

9.12 Funny Company
9.17 Willo The Wisp
9.22 Ovid and Gang
9.35 Alphabet Game
9.49 Aerobicise
10.12 Musical (Duran Duran — Blue Silver)
11.07 Greenacres
11.33 Nobody's Hero
11.58 Take The High Road
12.23 International 700 Club
12.52 Trapper John
1.39 Starring The Actors
2.08 Nero Wolf
2.55 Feature
4.22 World of Sport
5.27 News in Brief
5.42 Road to Wembley
6.41 Chance in a Million
7.08 The Nation
7.45 Main News
8.25 Dynasty
9.20 Spenser for Hire
10.07 Hollywood TV Theatre
11.48 Late News
11.58 Epilogue/National Anthem/Close.

### MIDLANDS TV

9.03 Funny Company
9.07 Willo the Wisp
9.12 Ovid And Gang
9.22 Alphabet Game
9.38 Aerobicise
10.03 Musical (Culture Club)
11.18 Greenacres

11.44 Nobody's Hero
12.10 Take The High Road
12.34 Pope John Paul
1.04 Trapper John
1.54 Starring The Actors
2.19 Nero Wolf
3.09 Feature
4.29 World of Sport
5.29 Early News
5.44 Road to Wembley
6.44 Chance in a Million
7.10 The Nation
7.45 The Main News
8.20 Dynasty
9.20 Spenser For Hire
10.15 Hollywood TV Theatre
11.30 Late News
11.45 Epilogue/National Anthem/Close

### RADIO ONE

6.00, ZBC News; 6.10, Good Morning; 7.00, ZBC News; 7.10, Songs For Faith; 7.30, Sunday Morning Service; 8.00, ZBC News; 8.10, Press Review; 8.20, Welcome To Portugal; 8.25, Waltz Time: 8.55, Let's Talk Travel; 9.00, Gardening in Zimbabwe; 9.15, Morning Melody; 10.00, Sunday Kaleidoscope; 11.00, Light Music; 11.20, Your World · 11.35, Sunday Potpourri; 11.50, Our Natural Resources; 12.00, Strong Poison; 12.30, Take It Easy; 1.00, Interlude; 1.05, Agritex Farm Diary; 1.15, ZBC News; 1.25, Weather Bulletin; 1.27, The World This Week; ing; 6.30, Sunday Evening Service; 2.00, It's In The Air; 3.00, Sunday Sport; 5.00, Melody Hour; 6.00, ZBC News; 6.10, Weather Bulletin; 6.11, Shades of Evening; 7.00, Dinner Music; 7.45, ZBC News; 7.55, Weather Bulletin 8.00 World Makers; 8.30, Sunday Concert; 10.00, ZBC News Round-Up; 10.05, Help Me Make It Through The Night; 11.00 Music Ex-Radio 1.

### RADIO TWO

5.25, Kutangisa Zuva Ranhasi; 5.30, Kwayedza; 6.00, Nhau; 6.10, Izindaba; 6.20, Kwaedza; 7.00, Nhau; 7.05, Izindaba; 7.10, Kwayedza; 7.30, Money and Life; 7.45, Revival Spin Time; 8.00, Press Review; 8.15, Kasiphindeni; 8.30, Weekend Bata Movement; 9.00, Nhau; 9.05, Izindaba; 9.10, Windmill Round-Up; 9.15, CIMAS; 9.20, Ingoma Zokhole; 9.30, Council Focus; 9.35, Naiyo Dzechitendero; 9.45, Taffy Tooth Club; 10.00, Kubi's Beauty Clinic; 10.10, Ingoma Zokhole; 10.30, ZMC Record Club; 11.00, Nhau; 11.05, Izindaba; 11.10, Ezakuleli; 11.45, Jarzin Man; 12.00, Reggae; 1.00, Nhau; 1.10, Izindaba; 1.20, Mamiriro Ekunze; 1.25, Rumba Music; 1.45, Radio Doctor; 2.00, Rumba; 2.30, Dzamhuri; 3.00, Soccer. 5.00, Disco And Programme Trailer; 6.00, Nhau; 6.05, Izindaba; 6.10, Mamiriro Ekunze; 6.15, ChiKrista Netsika; 6.45, Dzandakakusarudzirai; 7.00, Nhau; 7.10, Izindaba; 7.20, Sidli Nqoudo; 7.45, News; 7.55, Interlude; 8.00, Tenza Nehungwaru; 8.15, Ngatibnyinameni; 8.45, Marungwla; 9.15, Kusakara Kwedowo; 9.45, Mhuka Dzemuno; 10.00, News; 10.05, Nhau; 10.10, Izindaba; 10.15, Mazwi Eruponiso.

# COMMONWEALTH SECRETARIAT
Letter from Peter Williams

CABLES: COMSECGEN LONDON SW1

TELEX: 27678

TELEPHONE: 01-839 3411 Ext:

FAX: 01-930 0827

MARLBOROUGH HOUSE

PALL MALL

LONDON

SW1Y 5HX

Your ref:

Our ref: ED/DIR/ZIM

4 April, 1989

Mr Bhekimpilo Sibanda
Department of Film and Media
University of Stirling
Stirling
FK9 4LA

Dear Mr Sibanda

Thank you for your letter of 28 March. Although I was down
in Zimbabwe earlier this month and formally handed the report
of our Commission to the President on Thursday 16 March,
the report has not been released yet. Until Government publishes
the report I am not able to break any confidences. I regret
being unable to help you.

Yours sincerely,

Peter R. C. Williams
Director
Education Programme
Human Resource Development Group

PRCW/LdeSP

Letter from a student who dropped out from a part-time course

P O Box 227
**GABORONE**
Botswana

The Chairman (Dr John Rwambiwa)
(Multi-Media Det Survey)
Centre for Educational Technology
Univesity of Zimbabwe
P O Box MP 167
Mount Pleasant, Harare
Zimbabwe

Dear Sir,

This is in response to your letter dated 1st August, 1988. I would like to express my happiness and joy for being one of those chosen to answer the questionire.

But I am very sorry to to tell you that the project is now inapplicable in my case because I am no longer a student of the University of Zimbabwe having had to withdraw from the course I was following because as a foreigner in Zimbabwe, I could not get money to stay in Zimbabwe until I complete the course next year, 1989, because of my leaving the Seminary after deciding not to became a priest, which entailed the cessation of sponsorship by the Church for my education. Otherwise I would be writing to cooperate.

I wish you success in the project.

Yours faithfully

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□ Institutional borrowers
▨ Libraries

Byo...Bulawayo
Che...Chegutu
Chi...Chinhoyi
Gwe...Gweru
Hre...Harare
Ka...Kadoma
Kwe...Kwekwe
Ma...Marondera
Mas...Masvingo
Mu...Mutare
Ot...Other Centrers