Mozambique

NATIONAL HUMAN DEVELOPMENT REPORT 2000

Education and human development: Trajectory, lessons and challenges for the 21st century

SARDC

UNDP

Mozambique

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Preface

In prefacing the 2000 edition of Mozambique's National Human Report, I am once again pleased to note that the country has continued to make social progress in its efforts to broaden the choices available to Mozambicans as measured by the Human Development Index (HDI).

While the country remains at the tail-end of the global and regional human development rankings, the sustained and continuous social progress observed in recent years should be praised and further encouraged. Based on the historical series for the period 1996-1999, the national HDI has increased from 0.325 to 0.344 and the social components of the index are playing an ever-increasing role in the upward trend. Similarly, the provincial disaggregation of the HDI suggests that the existing regional development asymmetries are gradually decreasing.

Mozambique's National Human Development Reports of 1998 and 1999 focused respectively on two important themes of "peace and economic growth" and "economic growth and human development". It is also gratifying to recall that the 1999 Report brought to Mozambique two prizes in excellence awarded at the Second Global Forum on Human Development held in Rio de Janeiro.

Since the introduction of provincially disaggregated GDP data in last year's report, a great deal of attention has been devoted to the estimation of provincial and regional human development indices which has added substance to the debate of regional asymmetries in development in Mozambique. The reported results were well received by all and added empirical grounding to a debate that continues to be very dear to Mozambicans from Maputo to the Rovuma. This year's results confirm that although significant asymmetries persist, the variation in human development indices around the national average is decreasing. Geographic inequalities in the distribution of the benefits of development may therefore be declining though, one must not forget, the country as a whole remains very poor. What is required, as the authors suggest, is the levelling of benefits around an ever increasing national average or, what is commonly referred to in economic terms as pro-poor growth in all the regions of the country.

The professional partnerships formed with nationals have once again led to the production of a Report that I find to be relevant to the prevailing realities in the country. The analysis of issues raised in the Report has gone in depth while trying constructively to provide suggestions to address the key concerns.

The Report for 2000 has chosen to address a crucial concern in the national development agenda, namely the impact of education on human development in Mozambique. The approach adopted in this Report was to see education as a fundamental human right and thus linking human rights to human development.

While the country has registered considerable progress in the area of education, many challenges still remain in a country where 60.5% of the population cannot read and write. In terms of access to education, a wide gap exists between different regions within the country and between girls and boys. The situation is even more precarious in the rural areas where among women, only one out of 10 can read or write. This low level of literacy reduces the human development index throughout the country, and also constitutes a serious impediment to faster progress in this era of globalized information.

The constraints to development of the education system, which include the shortage of trained teachers, resources

and education materials, clearly demand particular attention. The education sector continues to depend on external assistance, though available information shows that the share of donor assistance to education declined from 63.3% in 1994 to 42.5% in 1999. As a proportion of the state budget, the share devoted to education, as well as other social sectors, has been rising since 1996 and additional public resources, previously tied up to service the country's debt, will be reoriented to boost social sector expenditure, in the foreseeable future, within the framework of the country's Action Plan for the Reduction of Absolute Poverty (PARPA).

With the growing problem of HIV/AIDS, the Report argues that the epidemic will demand profound changes in education in two different fronts, as highlighted in the prognosis for the period 2000-2010. On one hand there is the need to prepare to accommodate the likely losses of teachers, possibly 9,200 teachers and 123 headmasters and managers, up to 17% of personnel in the education system. It is estimated that in the centre of the country the losses could be as high as 23%. On the other hand, the educational system in general and teachers in particular will continue to be fundamental agents of the behavioural change that is required to contain the threat posed by HIV/AIDS.

Once again, it has been an honour and pleasure to associate myself with the team of national experts who have consistently devoted time from their busy schedules to the production of this 3rd National Human Development Report. I want to thank especially the steering committee, working group, contributors, SARDC and our editor for their dedication, which contributed in no small measure to the quality of this work. I should also like to extend a special word of gratitude to INE, whose staff produced the rich statistical information contained in this report, and Eduardo Mondlane University, our new partner in the mainstreaming of the human development paradigm in Mozambique.

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Abbreviations

AIDS	Acquired Immune Deficiency Syndrome
AGP	General Peace Agreement
APD	Public Development Aid
BM	World Bank
EDM	Mozambican Electricity Company
EIU	Economist Intelligence Unit
EP1	First level primary education
EP2	Second level primary education
ES	Higher Education
ESG1	First cycle of secondary education
ESG2	Second cycle of secondary education
ET-P	Technical and Professional Education
GDI	Gender related Development Index
GDP	Gross Domestic Product
GHDR	Global Human Development Report
GNP	Gross National Product
HDI	Human Development Index
HIPC	Heavily Indebted Poor Countries debt relief initiative
HIV	Human Immuno-deficiency Virus
HPI	Human Poverty Index
IAF	Household Survey

ILO	International Labour Organisation
IMF	International Monetary Fund
IFPRI	International Food Policy Research Institute
INDE	National Education Development Institute
LAM	Mozambique Airlines
MESCT	Ministry of Higher Education, Science and Technology
MINED	Ministry of Education
MISAU	Ministry of Health
MOZAL	Mozambique Aluminium Smelter
MPF	Ministry of Planning and Finance
NHDR	National Human Development Report
OGE	General State Budget
PARPA	Action Plan for the Reduction of Absolute Poverty
PEE	Education Strategic Plan
PPP	Purchasing Power Parity
RHDR	Regional Human Development Report
RUP	Rural and Urban Projection
SADC	Southern African Development Community
SIFIM	Indirectly Measured Financial Intermediation Services
SNA93	System of National Accounts 93
SNE	National Education System
STD	Sexually Transmitted Diseases
SWAP	Sector Wide Approach
TBM	Gross Death Rate
TBN	Gross Birth Rate
TC	Growth Rate
TCN	Natural Growth Rate
TDM	Mozambican Telecommunications Company
TGF	Overall Fertility Rate
TMA5	Under-five Mortality Rate
UCM	Catholic University of Mozambique
UEM	Eduardo Mondlane University
UNDP	United Nations Development Programme
UNESCO	United Nations Educational Scientific and Cultural Organisation
UP	Pedagogic University
ZIP	Zone of Pedagogic Influence

Introduction

One of the great achievements of the concept of human development since its articulation in 1990, is that it has succeeded in re-orienting the analysis of development towards the main dimensions of the choices made by human beings; that is, the expansion of their capacity to live increasingly long, materially and spiritually enriching lives.

The human development critique of the development trend centred on Gross Domestic Product (GDP) derives essentially from the argument that GDP reflects only the resources that a given nation has at its disposal. However, the differences between nations, in terms of their development, are shown not only in what each country produces, but in what each of them does with the resources generated through the productive process.

Thus, investment in education becomes an integral part of development. Education is an important dimension of human development, and plays a determinant role in expanding the many choices that people make. Indeed, out of theoretically unlimited choices, knowledge in its various forms plays the most determinant role in strengthening the other dimensions of human development.

Education expresses the socialisation of new generations, and the socialisation process is influenced by education, over time. Educated people are better able to adopt increasingly productive methods, they are innovative, and they create the conditions for a longer life. They are better prepared to influence social structures and organisation, and in the process improve the general well-being of society.

It is this relationship that justifies the definition of education as a fundamental right of humanity, enshrined in Article 26 of the Universal Declaration of Human Rights. This article declares, in its first point: "Everyone has the right to education. Education shall be free, at least in the elementary and fundamental stages. Elementary education shall be compulsory. Technical and professional education shall be made generally available, and higher education shall be equally accessible to all on the basis of merit." With this declaration, the right to education gained, in theory, the same force as the rights to citizenship or to freedom of expression. Thus, on the basis of the ideal underlying this declaration, exclusion from access to reading and writing is a privation that nations must take steps to eliminate.

In its essentials, the concept of human development does no more than pursue an ideal which is a matter of consensus among the community of nations when it stresses the role of education in the development of individuals and of nations, drawing attention to the need to observe this right.

The main purpose of this Report is to analyse the situation of education in Mozambique. The reason motivating the authors was not merely to approach, with intellectual rigour, a theme of great relevance for the concept of human development. Standing above this is the awareness that education has always represented and still represents the most complex and multifaceted development challenge facing independent Mozambique.

The resort to the colonial heritage as a reference point is sometimes regarded as a tired cliché, given its frequent use and abuse to justify situations that are often unjustifiable and to defend the indefensible. But in the case of education, reference to the colonial legacy is an imperative, precisely because it explains

many of the problems and challenges that education has confronted and continues to confront, and the incidents that have occurred on its journey through the first 25 years of Mozambique's existence as an independent state.

Mozambique inherited a heavy burden from the colonial past: in 500 years of domination, colonialism only managed to convert 7% of the indigenous population to its world of reading and writing. It is worth stressing that even the few who had the privilege of access to school during the colonial epoch received an alienating education, because the main foundation of the system was the denial of the values and culture of Mozambicans. This option is hardly surprising since colonial education was, by definition, also a means of domination.

The colonial reference is important because, on the one hand, it explains the appalling underdevelopment of the country. It would be utopian to imagine that just 25 years of independence could compensate for the legacy of 500 years, even without factors such as armed conflict, which had a major impact on ` independence. On the other hand, the colonial reference also explains, to some extent, the choices made after independence, many of which, viewed in the ever-wise light of hindsight, may now look like real pedagogic adventures.

Many of the problems that education faces today can be attributed to the urgency with which the new government tried to provide Mozambicans with a fundamental right that had been denied them for centuries, perhaps to the detriment of other aspects over which care should have been taken. This was an irresistible temptation for any nationalist movement of the time.

Furthermore, the analysis of colonial education gives us the context for the complete break with the past that had to be undertaken immediately after independence. The form and the urgency perhaps became, in many areas, enemies of perfection. But in 25 years the effort has produced palpable results: the literacy rate rose from 7% in 1975 to 39.5% in 1999, as a corollary of mass access to education.

Despite the remarkable strides, Mozambique is far from solving the problems of access to education for its population. The 1997 General Population Census showed that only 7% of the population have secondary education, 0.8% have technical education, and only 0.3% have higher education. Only 37% of children aged 6 to 12 have access to school. This means that, right from the start, the future of 63% of Mozambican children is compromised, because they are deprived of access to the basic instrument that would allow them to expand the range of choices for their lives. Gender and regional disparities in access are flagrant.

Those who have the privilege to sit for five or more days a week on the benches of the school system are witnessing a sharp debate in society, which asks to what extent education is really providing them with instruments that are necessary and relevant to the Mozambican context, and that will allow them to reward society with due compensation for the heavy resources invested in their training.

Furthermore, behind the improvement in the educational indicators lies an enormous challenge. When speaking of improvements in access, it is not very usual, for instance, to mention the fact that in 1999, 95.8% of the school population was concentrated in the two levels of primary education, namely EP1, which covers the first five years of schooling, and EP2 which contains the final two years of primary school. EP1 accounted for 87.9%

of all pupils and EP2 for 7.9%. The two cycles of secondary education between them account for 3% of the school population, while technical and professional education and higher education account for just 0.8% and 0.4% respectively.

The way in which the educational pyramid narrows so sharply draws attention to the effort the country must undertake to make the system effective and efficient, since the overwhelming majority of children do not have access to the full seven years of basic education.

The high repeat and drop-out rates illustrate the inefficiency of the system which obliges the country to spend resources that it does not have. The high repeat and drop-out rates illustrate the inefficiency of the system which obliges the country to spend resources that it does not have to cater for those who repeat their grades a provide education to children who eventually do not complete any educational cycle.

It should also be noted that the educational system is simultaneously being pushed to rethink all of its components, starting with the languages used to transmit knowledge, passing through content and assessment methods, and culminating in bringing education into line with the real development needs of individuals and of the country. To this we could add the issue of cultural values and structure of the social universes of which Mozambique is composed – not to mention the demands for gender equity and equality.

Clearly it will be no easy task to undertake this effort under conditions of scarcity of human and material resources, and in a world undergoing rapid and continual transformation, which obliges weak nations to battle constantly against being relegated to the margins.

The appearance of imponderable factors such as the HIV/AIDS pandemic represents a further challenge. Education is called upon to play a significant role, not only in protecting its own staff against the virus, but also to structure itself so as to serve simultaneously as a battleground against the spread of the virus, and as a means to manage the impacts. According to a study on the impact of HIV/AIDS on the education sector prepapared for the Ministry of Education, the public education sector will have no choice but to adjust to compensate for the loss of about 17% of its staff, according to an HIV-AIDS impact assessment study undertaken for the ministry of Education, including teachers and managers, and to accommodate a growing number of AIDS orphans in the period 2000-2010. This is occurring at a time when the sector is preparing to broaden access increasingly so as to reduce the rates of exclusion.

Is the Mozambican education sector capable of responding to these multiple challenges? Where will the necessary human and material resources come from - particularly if we take into account that over 40% of the education budget is funded by donors? How can the available resources be used in the most efficient and effective way? What reforms are needed to bring the system into line with development needs and socio-cultural reality? What adjustments are necessary to guarantee community involvement in education? What is the role of the private sector and of society in education? What synergies can be created between the public, private and community sectors? What role is reserved for the international community in this effort? How will the sector meet the challenges of globalisation, and how does it intend to take advantage of the positive aspects of this process? These are some of the questions raised and discussed in the five chapters of this report.

Obviously some questions will have more complete answers than others, but all are, in essence, discussed and problematised.

Education and human development in Mozambique

An entirely legitimate question that may occur to users of the report is this: to what extent does this report differ from the sector reports drawn up by the Ministry of Education? In the first place, the report is different from the sectoral documents because it analyses the performance of the education sector, first from the perspective of a fundamental universal right and then from the perspective of its relationships with the other choices made by people.

Education is a key indicator for measuring and analysing progress from the perspective of the human development concept. This is why the calculations of the Human Development Index (HDI) join the adult literacy rate to the combined enrolment rate for primary, secondary and higher education to produce one of its three variables; the other variables are longevity (expressed by life expectancy) and income.

This Report tries, as far as possible, to escape from simply listing successes, difficulties and possible solutions. Instead, the Report raises questions, analyses and interrogates the successes, identifies the obstacles, problematises the choices and their relevance for society, and above all points to possible solutions, while always avoiding a prescriptive pretension in its approaches.

Thus we stress that the purpose of the Report is not to discuss the education sector in general. The Report presents readings and perceptions on the relevance of the current education system from the perspective that this is a means whereby people acquire knowledge that they need to guide and fulfill themselves as human beings, to help them to eliminate shortages and privations, and provide them with a necessary tools to fight against exclusion and to improve their conditions as members of a community or communities. This is the spirit that guides the discussions in the following chapters.

Chapter 1 provides the conceptual framework of human development, in order to situate the analysis of the performance of the education sector. The chapter depicts the trajectory of the debate around the definition and measurement of progress, centering on the dogma of the automatic link between economic growth and development, and with an illustration on why Gross Domestic Product (GDP) has lost its hegemony as the main indicator of progress.

The chapter introduces succinctly the concept of human development and describes the methods of measuring it and how they have evolved. Finally, it deals with the convergence between human rights and human development and, to recapitulate, dedicates a section to the contents of the two previous National Human Development Reports (NHDR) for Mozambique.

Chapter 2 is divided into two parts. The first deals with the evolution of the overall HDI of Mozambique between 1994 and 1999, calculated according to international parameters which allow a comparison with other countries. One of the specificities of this exercise is that, unlike the previous reports, which were limited to using World Bank data, which forced continual adjustments leading to some confusion in the treatment of data, this time an attempt has been made to improve the use of indicators, resorting to the application of methodologies for estimating and updating them, and using to this end the up-to-date official statistics.

For example, instead of using the World Bank's real per capita GDP (in PPP dollars) for Mozambique, it was decided to establish the conversion rate used for estimating this figure and apply it to the entire series of data published by the National Statistics Institute (INE). The chapter estimates the HDI for 1999, based on the INE data, while for the year 2000 it makes projections based on Ministry of Education data, for the education component, and the government's preliminary estimates for real per capita GDP.

The second part of the chapter makes operational the measurement of human development in the country. Just as in the 1999 edition, a methodology has been developed to estimate the GDP disaggregated by province. The methodology followed can be found in the technical notes appended to the Report. The exercise was intended, in the first place, to estimate the contribution of each province to the GDP in 1999, and analyse the performance in each province. Secondly, the disaggregated GDP makes it possible to estimate the HDI of each province, and to analyse the comparative trends between the various administrative regions.

Chapter 3 debates in detail the question of education in Mozambique. The first part provides a theoretical framework for the theme with a review of the evolution of education in the various stages of history. This part of the chapter makes a brief survey of the perception of the nationalist movements on the role of education, and ends with independence in 1975.

There follows a review of the evolution of education and its content in the period from independence to 1983, the point where the peak of new entries into the system was reached. The following period, up to 1992, was characterised by the resurgence of armed conflict, which had devastating effects on the system in terms of schools destroyed, and the consequent limitation on the supply of education.

The third part of Chapter 3 portrays the post war recovery efforts, advocating a series of reforms intended simultaneously to improve effectiveness and efficiency, to expand supply, and to bring education into line with the development challenges facing the country. The final part of the chapter lists the main challenges that the education sector will have to face in the coming period.

Chapter 4 deals with the appearance of the HIV/AIDS epidemic which threatens education from within and without. From within, because the prognosis is that thousands of teachers and managers will be infected and will eventually perish, victims of AIDS. From without, because education will be obliged to play a multi-faceted role in accommodating the growing number of orphans within the school population, while at the same time it must work with communities on methods of prevention and how to care for those suffering from AIDS. The system of education will have to be adapted to take account of the social changes provoked by the epidemic.

The chapter gives a short history on the origins of the epidemic, its spread and the possible social, demographic and economic repercussions. The fulcrum of the chapter is the discussion of the possible impacts of HIV/AIDS on education and the estimate of the costs in terms of material and human resources for education. The study is inspired by the experience of other countries in the region in order to warn of the probable impacts, and also to make a series of recommendations deemed essential to manage the epidemic and attenuate its negative impact on the sector.

Chapter 5 presents the main findings and conclusions of the analyses made throughout the Report.

Chapter 1

THE CONCEPTUAL AND METHODOLOGICAL BASIS OF HUMAN DEVELOPMENT

Origins, evolution and measurement of human development

The natural trajectory of new truths, says Nobel Economics laureate Amartya Sen, paraphrasing T.H. Huxley, is that they start as heresies and end as superstitions[1]. In this context, the concept of human development may be regarded, in part, as fortunate.

The concept of human development did not escape the habitual scepticism that greets the birth of revolutionary ideas from the makers of systematised knowledge - academia.

The Bengali professor Muhammad Yunus draws an interesting analogy between the revolutionary idea of the Grameen Bank, aimed essentially at helping the poor, and the advent of the concept of human development. Yunus remarks that when he argued that development also consisted of helping people take care of their basic needs, such as having another meal or a change of clothes, they ridiculed him, and told him, "That is no development... Development is growth of the economy... growth will bring everything." And he continues, "We carried out our work as if we were engaged in some very undesirable activities. When UNDP's Human Development Report came out we felt vindicated"(UNDP, 1999: 15).

In the ten years that have passed since it was first articulated, the concept of human development has not followed Huxley's cycle, that is, it has not turned into a superstition, but it has reinforced itself against the onslaught of the critics, of then and of now, who still think that time will eventually relegate it to the undignified status of a simple heresy.

The speed with which human development managed to gather the critical mass necessary to challenge theories which, at the time of its emergence, had become intellectual fortresses in articulating the concept of development, proves the worth of an idea that was born at the right time.

The spiritual cradle of the concept of human development was growing discontent with the prevailing definition of development at the start of the 1970s, which generally gravitated around the Gross Domestic Product (GDP). Part of the discontent arose as a challenge to the assumption of the theory which reduced development to the accumulation of capital, concentrated only in investment, industrialisation and the accumulation of financial capital.

Disagreement with the excessive dependence on GDP as the general measure of progress began to be expressed within some academic sectors and found an echo in multilateral organisations such as the International Labour Organisation (ILO), and in developing countries. It gathered impetus during the 1980s.

The argument of the new school of thought was not that GDP was completely irrelevant as an indicator of economic dynamics. The problem, the argument went, lay in escaping from counter-productive and simplistic mistakes of the sort "GDP has grown, and so we are more developed". The argument is that in isolation GDP is not a good measure of development, since it is not sufficiently inclusive in its measurement of prosperity. GDP envisages only the quantification of the wealth generated, but neglects

[1] Sen, A (1999). Development as Freedom, Oxford University Press, United Kingdom

important factors such as the distribution of this wealth.

More than this, what concerned this dissident current was the fact that this indicator does not capture other dimensions, much less express the contribution of aggregate production in expanding the well-being of individuals, including access to health care and access to education. Nor does it incorporate other dimensions that lend quality and dignity to human life.

Growth and development

The "anti-GDP" critique reflected above all disillusion with the supposed automatic linkage between economic growth and "development". The school of development economics in the 1980s vehemently attacked this dogmatic trend, arguing that the assessment of the impact of economic growth on development should take into account, not the aggregate volume of production represented by GDP, but above all how social dimensions such as poverty, unemployment, inequality and inequity, behaved in response to the evolution of GDP.

The findings of academics such as Dudley Seers fall into this perspective. Seers (1986) argued that it would be peculiar to talk of "development" if, during a lengthy period of sustained economic growth, the poverty, unemployment and inequalities "..had worsened, particularly in the cases where all these dimensions had undergone deterioration, even if in purely statistical terms per capita income had doubled over the period" (in Todaro, 1986: 69-70).

It is worth stressing that the idea is not to minimise the dominant role of the economy in development. Indeed, there is a close relationship of complementarity and interdependence between growth and development. Of the many linkages between economic growth and human development, let us point to four as examples:

- economic growth can generate resources for increased investment in education and health, and minimise or eliminate poverty;
- economic growth makes possible steady growth in incomes, if equitable distribution policies are guaranteed, thus constituting a material basis for development;
- economic growth makes possible social equilibrium through improvement in urban and rural social infrastructures which in turn can lay the basis for driving economic performance forward;
- improved economic performance in a perspective of equity increases the possibilities of political harmony, while at the same time providing new opportunities for social development.

It is a given that development needs economic growth; but growth alone is not sufficient to generate "development" in its broader definition.

Thus the links between development and economic growth should be promoted through deliberate policies, without neglecting the fact that, just as economic growth does not take place in isolation, so access to education and health may prove difficult to obtain with a feeble and declining economy. This is one of the main arguments in the concept of human development, whose evolution and measuring instruments we shall now analyse.

The concept of human development

The concept of "human development" arose in the late 1980s as a corollary of the emerging consensus that the definition of development had to put human beings at

Economic growth in a country of many "realities"

Box 1.1

The first of the series of reports on human development in Mozambique asked a pertinent question: did the economic growth of recent years represent "the equitable growth of human development, or the inhuman deepening of inequalities between the sexes and between social, ethnic and racial groups ?"

Rather than just a simple abstraction, this uncomfortable question mirrors the idea that, in the private and public domains, Mozambique is not untouched by the clash of ideas over the "automatic" link between economic growth and development. Indeed, residents of the Mozambican capital frequently say they have been "in the real country" when they mean that they have travelled outside of "developed" Maputo.

Since the mid-1990s, Mozambique has been regarded as a model of success in economic reforms, rewarded with high rates of economic growth, as shown in graph 1.1

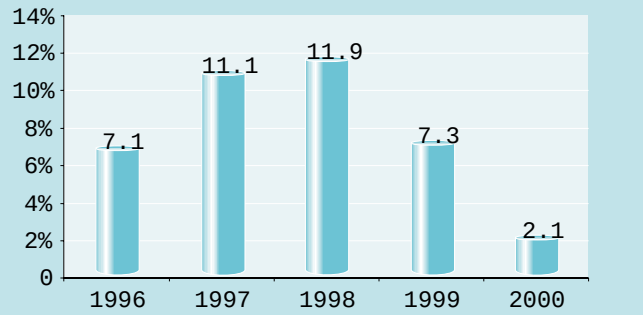
Economic success, after many years of stagnation or slow growth caused by the combined effects of armed conflict and inadequate policies, has naturally been celebrated with exuberance. Unfortunately, the emotion - understandable for a country that has been martyred for a very long time - has seemed at times to hide the true scale of the challenges facing Mozambique.

The attitude of "economic triumphalism", which characterised a certain phase of the post-war period, seemed to ignore two basic questions. First, the economic growth that took place started off from a tiny base. Furthermore, there was what Sen (1999) describes as the possible "dissonance" between the purely statistical effects of economic growth (increase in per capita income), and its impact in improving the living conditions of the population. It is important to mention that triumphalism was, not infrequently, encouraged by the optimism of international financial agencies who insisted on viewing Mozambique as a successful country which could lend some legitimacy and credibility to the effectiveness of the economic model under implementation.

The lack of inclusive, up-to-date and reliable data on the social situation to some extent contributed to consolidate the mystification of the impact of economic performance on social conditions.

The publication of the Poverty Profile, based on the Household Survey data (IAF, 96-97), to some extent dampened illusions and moderated the emotional discourse. The study showed that Mozambique had shocking levels of poverty, with two out of every three

Graph 1.1: GDP growth rate



Source: INE, 1999; MPF, 2000

Mozambicans living in conditions of absolute poverty, with a daily consumption of less than the equivalent of 5,433 meticais (40 US cents in 1997).

The data from the Poverty Profile and the IAF formed important bases for drafting a plan to alleviate absolute poverty, which is currently under implementation. Faced with this reality, it is pertinent to question whether the level of deprivation in the country was not sufficiently evident to cause some disquiet on the part of policy-makers. Furthermore there are voices that query, even now that the tonic of speeches has switched from "two digit growth" to "the fight against poverty", whether the Action Plan for the Reduction of Absolute Poverty, despite its multi-sectoral nature, is indeed laying stress on development in its approach.

It is worth mentioning that the initiative to draw up Mozambique's own National Human Development Reports was also driven by the need to analyse, through the national statistical data available, development trends from a social perspective, and in a more inclusive manner, in order to draw attention to dimensions that might be relegated to a secondary position in analysing and planning development.

The disquiet reflected in the question asked in the NHDR 1998 was based on some legitimate suspicions as to the real effects of economic growth on the well-being of the population. In other words, the core question was to what extent economic growth was at least having a positive impact on the dimensions of development listed in the quote from Dudley Seers in the introductory part of this chapter.

(UNDP, 1998; INE,1999; MPF, 2000-2001).

the epicentre of any development process.

The first Global Human Development Report (GHDR) in 1990 opened with the argument that "the true wealth of a nation is its people... the objective of development is the creation of an environment which allows people to benefit from a long, healthy and creative life" (UNDP, 1990: 1), and defined development as the process of enlarging people's choices.

The concept recognised that people's choices are, in principle, disparate and unlimited. Long and healthy lives, access to knowledge in order to receive and share information, and opportunities to obtain income that permits a decent life, represent some of the basic choices to which most people aspire.

The main challenge, once the concept was articulated, was to find a measuring mechanism that would cover the social dimensions representing people's choices. Clearly this exercise was complex, given that it is difficult, if not impossible, to try to aggregate the variety of people's choices into one, two or more indicators.

The difficulty was partially overcome with the concentration on what were considered the three main dimensions representing choices: longevity, level of education and economic income, brought together into a single synthetic index. Thus the Human Development Index (HDI) was born, which, as we shall see later, would come to be broken down into other indices.

Since then the concept itself has been evolving and incorporating other dimensions, including gender disparities and more inclusive measurements of poverty. Recently the concept has incorporated civic freedoms, the right to social justice, access to basic social services such as health and education, political participation and general social well-being in the analysis of development.

The concept and its instruments are in continual transformation in an effort to capture the richness and complexity of the issues being analysed as well as the broad development dimensions it intends to measure.

Measuring human development and the methodology of calculating HDI

The first Global Human Development Report (GHDR), as mentioned above, proposed an index covering the various dimensions of people's basic choices - the Human Development Index (HDI) - as the general measure of human development, and the classification of countries based on this.

The methodology of calculating the HDI is explained in detail in the technical notes in the appendices. But for the purposes of this section, it is enough to mention that, methodologically, the HDI includes three variables: the longevity index measured by life expectancy at birth; the educational index measured by a combination of the adult literacy rate (with a weighting of two-thirds) and the joint enrolment rate in primary, secondary and higher education (with a weighting of one-third); and finally, the standard of living index, measured by real per capita GDP expressed in PPP (purchasing power parity) dollars. The HDI is calculated as a simple average of these three indices.

The weight of education in the HDI

The choice of education as the theme for this report results from the central importance of knowledge in facilitating

people's choices. Although education in Mozambique is debated in detail in Chapters 3 and 4, even at this initial stage it is pertinent to mention briefly the importance of knowledge in human development. Education has an important specific weight in the HDI, not only because it reflects the effort to satisfy a fundamental right, but also because it supplies the population with the information and instruments needed to expand their list of choices.

When carefully programmed and implemented, education can contribute to establishing strong links with the other components of the HDI index - longevity and income - as well as strengthening linkages with ideals of justice and the enjoyment of people's civic and political rights.

It is worth mentioning that the way in which education figures in calculating the HDI is rather demanding, in subtly placing special stress on the level of exclusion.

In the first place, by using the adult literacy rate, the methodology indirectly captures that percentage of the population excluded from reading and writing, and thus challenges countries to take corrective action.

Secondly, by using the joint enrolment rate, the methodology captures as a percentage that portion of children and young adults who are inside the education system, in relation to the universe of people who are "excluded" - or those people who theoretically ought to be within the system. The result is to draw attention to the distance that separates current achievements from the ideal level in terms of access to education.

The demanding character of the methodology has a logical explanation. On the one hand, educated people are more likely to optimise their performance as producers, to increase their capacity of innovation, and to profit from opportunities, with a notable impact on their own income and that of the country.

Furthermore, education allows the mastery of techniques that facilitate the provision, in quantity and quality, of health services, either through the capacity to treat diseases, or through preventive methods. For example, a woman with a certain degree of education is more likely to have less children, to accept and to follow easily the requirements of preventive medicine (vaccination cycles etc), and of the treatment of illness, and is better able to provide for the basic needs of her family. These facts have positive effects on birth and death rates, and they may thus exercise influence on factors such as longevity.

Finally, it should also be taken into account that the right to education is enshrined in Article 26 of the Universal Declaration of Human Rights. The stress laid on education thus expresses the concern of the community of nations to assess the stage of provision of this basic human right which opens up to individuals access to the information and instruments necessary not only to improve their material well-being, but also to make informed choices about their lives. In the final analysis, one must recognise that the awareness of citizenship in all its scope is also better articulated when the members of a community are educated.

Evolution of the HDI

The HDI, as a measure of development, has not remained static. In the period from 1990 to 1994 the HDI was successively modified in response to pertinent

observations. But as from the 1994 Global Human Development Report, the HDI methodology was standardised in order to make the index more precise (UNDP, 1994: 90-95). In 1999, the treatment of the index underwent a further alteration, with a change in the treatment of income. The alteration was intended to correct the excessive discount which penalised efforts to increase incomes by substantially reducing the weight of real per capita GDP in the HDI as from the threshold.

The HDI makes it possible to compare countries from a global perspective. In the GHDR, countries are classified into three groups:

- Countries of low human development (HDI of up to 0.499);
- Countries of medium human development (HDI of between 0.500 and 0.799):
- Countries of high human development (HDI equal to or greater than 0.800).

Chapter two of this Report devotes a section to analysing the overall performance of Mozambique's HDI. With an estimated HDI of 0.341[2] in 1998, Mozambique was classified among the seven countries with the lowest human development indices in the world, higher only than Guinea-Bissau, Burundi, Ethiopia, Burkina Faso, Niger and Sierra Leone (UNDP, 2000: 160).

The usefulness of the HDI does not lie merely in making it possible to classify the countries of the world according to the typology created by the GHDRs. Above all, it is an instrument that allows development analysts to construct indicators for analysis, and influence reflections on the planning process and intervention in development at various levels.

Other measuring instruments

The HDI is viewed as a sufficiently inclusive methodology since it combines income and physical and educational capacities, and to some extent expresses one of the basics of human development, which is that economic activity enshrined in the GDP is just a means and not an end for development.

However, it is important to stress that human development is much broader than the HDI reveals. The HDI does not, nor can it, succeed in capturing the concept in all its complexity and richness. It is limited to providing an image of people's basic living conditions, drawing the public's attention to disparities and allowing informed intervention in the development processes and policy formulation. (UNDP, 2000: 96).

The GHDRs have been building more specific and disaggregated indices that add other dimensions of human choices not covered by the HDI. The various measuring instruments are summarised in Table 1.1

GDI - Gender-related Development Index

The GDI was introduced in the 1995 Human Development Report. This index uses the same variables as the HDI, but adjusted in each country in relation to the differences in life expectancy, educational level and income between men and women. The greater the disparity in human development, the lower will be a country's GDI when compared with its HDI (UNDP, 1997: 124).

GEM - Gender Empowerment Measure

The Gender Empowerment Measure, also introduced in 1995, measures inequality

[2] It differs slightly from the estimate based on official and updated data published by INE. See Chapter 2

Table 1.1 HDI, GDI, HPI-1, HPI-2 - Same components, different measurements

	Longevity	Knowledge	Decent standard of living	Participation or exclusion
HDI	Life expectancy at birth	1. Adult literacy rate 2. Combined enrolment ratio	Adjusted per capita income in PPP$	–
GDI	Female and male life expectancy at birth	1. Illiteracy rate 2. Female and male combined enrolment ratio	Female and male earned income share	–
HPI-1	Percentage of people not expected to survive to age 40	Illiteracy rate	Deprivation in economic provisioning, measured by 1. Percentage of people without access to water and health services 2. Percentage of under weight children under five	–
HPI-2	Percentage of people not expected to survive to age 60	Functional Illiteracy rate [a]	Percentage of people living below the income poverty line (50% of median disposable income)	Long term unemployment rate (12 months or more)

[a] based on level 1 prose literacy according to the results of the OECD International

Source: UNDP (1998), Human Development Report 1998; P. 15

between the sexes as regards participation in key economic and political areas. The GEM uses variables constructed explicitly to measure the relative acquisition of power by men and women in the spheres of political and economic activity. In particular, this measure takes into consideration the percentage of women in parliament, and among administrators, directors and professional and technical staff, as well as women's income compared to men's. Unlike the GDI, the GEM exposes disparities in terms of opportunities in selected areas.

HPI - Human Poverty Index

The HPI was introduced in the 1997 GHDR. It is a composite measure, stressing several characteristics of deprivation, in order to reach an overall judgement about the level of poverty in any given community. This diversifies away from the conventional definition of poverty based only on consumption.

The HPI concentrates on deprivation in three essential areas of human life, already reflected in the HDI - longevity, knowledge and a decent standard of living, with slight variation. The first deprivation concerns survival - vulnerability to death at a relatively early age (40 or less in developing countries, and 60 in the case of industrialised countries). The second concerns knowledge - being excluded from the world of reading and writing. The third concerns a decent standard of living in terms of overall economic provisioning (incidence of poverty, percentage of people without access to drinking water, and without access to health and sanitation services), and the percentage of children under five who are underweight.

The instruments for measuring human development have not remained stationary; they have been undergoing continual transformation and refinement to bring them into line with the needs of the moment.

The link between human development and human rights

The traditional and conventional approach to human rights was normally associated with limits on political freedoms and the enjoyment of civil rights, denounced in regular reports by international organisations.

This was what justified, to some extent, the uneasy scepticism of some sectors within developing countries when the UNDP announced that the theme for the GHDR 2000 was the relationship between human rights and human development.

For a long time the two approaches have marched along parallel paths, with the human rights movement directed essentially towards monitoring respect for civil rights and political freedoms, while human development dealt with analysis in the socio-economic domain.

While it may be an established point that, in conceptual terms, human development and human rights start out from somewhat different assumptions, it is undeniable that the two concepts share the same motivation and vision: the promotion of the dignity and well-being of individuals.

The convergence in what motivates and moves the two concepts establishes a strong link of complementarity and even of interdependence between them. Thus an integrated approach of human development and human rights has laid the conditions for the emergence of a perspective posing the right to development as one of the basic freedoms of individuals.

The GHDR 2000 takes up this innovative approach, and discusses the advantages of such a linkage. For example, the full use of civil rights and political freedoms enables the poor to oppose openly the trends and forces of social exclusion, expropriation, exploitation and other excesses.

In this context, if a community's inadequate access to education, nutrition or health services, noted through the human development measurement and analysis, were understood as a violation of fundamental rights, the approach itself would impel social forces into action to hold people publicly responsible, which is in itself halfway towards a solution.

The human development indicators are aimed at assessing the broadening of people's capacities, while human rights focuses on the enjoyment of freedoms and responsibilities, and the dignity of individuals, as well as the role of the leadership in safeguarding these rights. In other words, while human development concentrates on inputs and their results, the perspectiv of human rights is concerned with identifying the causes of disparities and insisting on their correction. In this relationship, human rights and human development strengthen each other. (UNDP, 2000: 91)

This conceptualisation is simple and complex at the same time. Simple, because on the one hand it insists on the quantitative and qualitative analysis of social phenomena. Complex, because it advocates an approach of causality that escapes from the tradition of static definitions of the observed and quantified phenomena.

When Sen (1999) defines poverty as the "privation" of the capacities needed to lead a life that the people affected value and long for, he is, in the first place, arguing that poverty is not a rational choice. It is the result of socialisation, or rather it is the product of objective factors that inhibit particular groups of people, and even entire nations or geographical

areas, from generating the income necessary to ensure a better life.

By stressing "privation", he implicitly indicates that the solution of the problem is to remove the factors of privation, which is the same as advocating the social responsibility of "the main actors". These "actors" may be confined to national boundaries, or they may be international organisations.

In other words, more than just talking about the simple need to fight poverty, the underlying idea is that individuals have a "right" not to live in conditions of "privation". Observing the rights to decent work, to participation and freedom of association and expression, the right to live free of want and fear, and the right to non-discrimination allows the establishment of "social arrangements" and "institutional orders", whether national or international, which promote poor people from the category of "passive recipients" of the results of sophisticated development programmes to the objects and subjects of this process.

In this approach, the poor also become part of the solution to their own undesirable condition. The role of the state and of society in this approach is to place freedom from all privations at the epicentre of initiatives, and to play a role of supporting and protecting human capacities, rather than to set themselves up as supply systems or conduits for services ready to be consumed. The rights to development and to education dealt with earlier also fit into this perspective (Sen, 1999: 53).

Recent themes of the Global Human Development Reports

The association between human rights and human development in the GHDR 2000 is an eloquent illustration that the importance of the reports goes beyond the simple annual calculation of the indices that allows the UNDP to classify countries on a particular scale. If this was their only function, the GHDRs might eventually have lost their relevance, all the more so because the main indicators used as variables are not of such a nature as to undergo sudden alterations from one year to the next.

The indices are important indicators in analysing development. But the major contribution of the GHDRs lies precisely in the themes developed in each edition, which always offer an innovative analysis of the overall problems and challenges of development.

It is important to stress that many of the themes dealt with over the last ten years of the GHDRs demanded a great deal of creativity, daring, and intellectual audacity. But the rigour of the analyses projected the concepts developed in the

The 11 themes of the GHDRs — Box 1.2

- 1990 – Concept and Measurement of Human Development;
- 1991 – Financing Human Development;
- 1992 – Global Dimensions of Human Development;
- 1993 – People's Participation;
- 1994 – New Dimensions of Human Security;
- 1995 – Gender and Human Development;
- 1996 – Economic Growth and Human Development;
- 1997 – Human Development to Eradicate Poverty;
- 1998 – Consumption for Human Development;
- 1999 – Globalization with a Human Face;
- 2000 – Human Rights and Human Development

Source: UNDP, 2000

reports, transforming them into important instruments in the debate on global development and international economic relations, with the analysis always anchored in the welfare of human beings.

This spirit also underlies the drafting of the national reports, such as this work.

Many of the themes dealt with in the GHDRs are beginning to leave the sphere of the UNDP where human development

Mozambique in the category of excellence

Box 1.3

The effort devoted in recent years to drawing up the Mozambican series of National Human Development Reports was recognised in 2000, when the 1999 report was distinguished with two international prizes for excellence.

The 1999 NHDR, entitled "Economic Growth and Human Development: Progress, Obstacles and Challenges", was awarded prizes for "presentation and graphics" and for "participation and impact on policy". It was thus placed among the ten best national reports in the world.

In all, 269 national reports from 120 countries competed for prizes in four categories which were instituted for the first time last year by the United Nations Development Programme (UNDP). The four prize categories are:

- Excellence in the quality of analysis;
- Excellence in the innovative use of human development measuring instruments;
- Excellence in presentation and design;
- Excellence in participation and policy impact.

Burkina Faso, Egypt and Mozambique were the only African countries called to the podium to receive prizes during the Second World Forum on Human Development, held in Rio de Janeiro, Brazil. The three countries received awards in two categories.

The prizes were instituted as the UNDP's recognition of the contribution made by the national reports to the popularisation and consolidation of the concept of human development, and particularly to introducing it "into national policy dialogue, not only through development indicators and policy recommendations, but above all through a process of consultation, data gathering and drafting of reports led by the countries themselves."

The prizes are also aimed at promoting higher levels of academic analysis and the promotion of sustainable human development as a unified school of thought.

Winning the prizes shows that Mozambique is in the fontline of this movement, and it is also certainly a challenge for the drafting of future reports.

Table 1.2: The class of excellence of the national reports

1. Quality of analysis

Country	Year
Burkina Faso	1998
Chile	2000
China	1999
Egypt	1997-1998
Latvia	1999
Lebanon	1999

2. Innovative use of measuring instruments

Country	Year
Armenia	1999
Brazil	1998
Bulgaria	2000
China	1999
Philippines	2000

3. Presentation and design

Country	Year
China	1999
Costa Rica	1999
Lebanon	1999
Mozambique	1999
Philippines	2000

4. Participation and policy impact

Country	Year
Armenia	1999
Bolivia	2000
Burkina Faso	1998
Egypt	1997-1998
Latvia	1999
Mozambique	1999
Philippines	2000
Bulgaria	2000

was originally articulated, and are being taken seriously in forums which, up to a short while ago, were tied to the dogma that "economic growth will bring everything". This is a reality that, if truth be told, was unthinkable a few years ago.

Making human development operational in Mozambique

In light of the return to peace and the economic upswing, Mozambique's human development has been analysed by Mozambican intellectuals in an initiative encouraged by the UNDP over the past three years.

This initiative is not confined merely to the faithful reproduction of the concept of human development as articulated and developed by its proponents. It intends, above all, to emulate also the spirit achieved, through a non-prescriptive approach to questions sometimes regarded as uncomfortable, but relevant to development in Mozambique. The starting point is that the analyses must be supported on a solid, reliable and up-to-date statistical basis, which allows one to analyse and problematise processes whenever possible. Close cooperation with the National Institute of Statistics (INE) in the preparation of these Reports has allowed access to, and use of, solid and reliable data.

This effort is beginning to bear fruit, not only through winning awards, as described in Box 1.3, but above all by recognition of the report as a working instrument, and as a reference point in planning and intervention in, the country's development at various levels.

The first national human development report was drawn up in 1998, under the theme "Peace and economic growth: Opportunities for human development". In this report, the concept of human development, the basis of the data for constructing Mozambique's HDI, and its evolution, were discussed. The objective of the report was to encourage reflection on the development challenges that Mozambique was facing and continues to face, from a human development perspective.

The main thesis of the 1998 report was that the advent of peace and economic growth represented opportunities for human development. But for this to take place, it was necessary to advance from the pursuit of macro-economic equilibrium to the drafting of deliberate policies that would allow the Mozambican population to make the most of the environment created so as to reduce gradually the sharp level of deprivation.

The first chapter summed up the concept of human development and its importance in the debate on development. Chapters I and II analysed the components of the HDI, and the evolution of the index in recent years. These chapters also referred to the need for future research around the HDI in order to study regional and provincial differences, and differences between sexes and among the main regions, when the statistical basis for this was available.

Chapters 3, 4 and 5 discussed peace and economic growth and attempted to assess to what extent economic growth was being translated into human development in Mozambique.

The report also showed that Mozambique needed to ensure a transition from national insecurity to real human security, including freedom from fear and freedom from want. While freedom from fear could be achieved through

effective social peace, freedom from want can only be achieved by sustainable human development.

The case selected for debate in the report was the development of cashew production, with the aim of understanding the complexity of the ties and agents of economic growth and of human development.

The 1999 report, entitled "Economic growth and human development: Progress, obstacles and challenges", took up the challenge, launched in the first report, of disaggregating the HDI, in order to estimate differences in the levels of human development in the various regions of the country.

Through this exercise, the report attempted to make this instrument of measuring development operational within Mozambique. To this end, a methodology was developed for disaggregating the GDP by province, first in order to estimate the contribution of each region to the production of the nation's wealth, and secondly, the HDI of each administrative region, in order to analyse the differences and similarities among the regions.

The main concern of the exercise was to provide a solid conceptual framework, supported on a reliable and up-to-date statistical basis, for the debate on regional asymmetries in order to prevent the emotion of political debate from creating conditions propitious for the fragmentation described in Box 1.4.

The report also analysed the role of wage labour in the survival of rural households and the challenges to human development that arise from the threat of HIV/AIDS. The 1999 report also tried to analyse in rather more depth and to update the analysis and estimate of the main human development indicators in Mozambique.

The current report whose theme, as mentioned in the introduction, is "Education and human development: Trajectory, lessons and challenges for the 21st century", also lays particular stress on the regional and provincial disaggregation of the data so as to make the report not only a reference point for analysing development, but above all an essential instrument in planning and policy development. It analyses the evolution of human development in Mozambique in 1999 on the basis of up-to-date information, including a brief description of the evolution of the country's HDI in 1999, and makes an estimate for 2000.

It also analyses the performance of human development indicators in the various regions of the country, taking as its basis the economic development of the regions, as well as the behaviour of the other HDI variables during the period under analysis.

The roots of fragmentation and conflict

Box 1.4

Group differentiation by such characteristics as ethnicity, race, religion and language can sometimes result in social fragmentation, with groups perceiving themselves as having distinct interests even though they may have similar socio-economic status. Ethnicity - a multi-dimensional phenomenon and a controversial notion - is based on perceived cultural differences between groups in a society, differences that form a powerful source of identity and a base for political mobilisation.

Some scholars have treated ethnicity as a form of capital - a resource or asset on which members of a particular ethnic community call in their business and political dealings. Common ethnic affiliations can be a basis for bonding social capital, providing community members with a wide range of benefits (credit, employment, marital partners), while imposing significant obligations and commitments (financial support, conformity). Membership in an ethnic community can also generate negative externalities, as with conflict between ethnic groups. Such divisions can be obstacles to collective action: in the United States greater ethnic fragmentation is associated with lower participation in civic activities.

Ethnicity can become a basis for competition for political power and for access to material resources. Unless institutions of the state and civil society offer forums for mediating intergroup rivalries and forging cross-cutting ties among diverse ethnic groups, these ethnic cleavages can lead to conflicts, tearing a society and economy apart, leaving everyone vulnerable to poverty.

The extent to which social fragmentation leads to conflict depends largely on administrative and political institutions. To create a functioning society, a whole range of social and political institutions must work together. By contrast, breakdowns in governance and in the delivery of public goods and related social services create conditions for social unrest and conflict - as do breakdowns in the institutions of conflict mediation, such as representative politics and the rule of law.

Ethnic cleavages can affect development outcomes in many ways. They can influence the internal organisation of government and the allocation of public spending, leading to unequal distribution of public goods and services. They can encourage commission-seeking, reducing the efficiency of public spending. Further economic distortions enter when powerful ethnic groups use their political power to increase their incomes relative to those of others. Recent studies in Ghana show that locally dominant groups receive a 25 per cent premium over the wages of other groups in the public sector - a discrepancy that leads to unrest and poor performance in the sector. Such distortions in the distribution of resources and the efficiency of their use show up in development outcomes.

Countries with high ethnic diversity need to build the political conditions for integrating diverse groups so that they can function collectively. With well-functioning administrative and political institutions, multi-ethnic societies can be effectively shaped into an "imagined community" of nation and state. Knitting diverse communities together through a multiplicity of civil and state channels - to avert conflict - was a major goal of the early designers of European unity. The communist regimes of the Soviet Union and Yugoslavia, despite their economic and political failures, not only reduced economic inequalities, but also managed ethnic conflict. With their collapse, violent ethnic conflicts broke out because no alternative ideological and institutional framework had evolved to mediate them.

In sub-Saharan Africa nation-states were fashioned out of arbitrary divisions of territory by colonial powers - divisions often based on convenient geographic markers such as lines of latitude and longitude, with no consideration of the social units of local populations. With disparate groups and few supra-ethnic institutions to mediate among them, the creation of nation and state has been fraught with problems. Colonial rulers and local politicians have often manipulated ethnic tensions for private gain, sometimes leading to gruesome civil wars.

Inflaming ethnic tensions and civil unrest is a frequent strategy for gaining and keeping power in these circumstances, since it justifies expanding brutal military forces while undermining the capacity of opposition groups demanding reform. Over time ethnic minorities, especially those facing discrimination, inequality or conflict, can become ethno-classes, groups whose ethnicity-based sensibilities and demands become independent causes of conflict.

Constructing high-quality public institutions is essential for ensuring that diverse identities become a developmental asset, not a source of political division and violence. This is especially important in countries with abundant natural resources, such as oil, diamonds and minerals. In environments with little institutional accountability and transparency, the exorbitant income from these resources become a primary source of competition among ruling fractions.

Civil society organisations and the state can do much to lay the institutional foundation for groups to cooperate for the common good. Institutions need to be participatory, credible and accountable, so that people can see the benefits of cooperation. Underpinning these institutions need to be constitutional and legal systems and representative political systems, which allow groups to work out their interests through mechanisms other than violence. Some social integration can be achieved by encouraging people to learn each other's languages. Another important requirement for effectively helping excluded groups is to collect accurate data on them.

Adapted from World Development Report 2000/2001: Attacking Poverty, The World Bank; pp 126-128.

Table 2.1. Updated HDI for Mozambique, 1994-1999

	1994	1995	1996	1997	1998	1999
Basic data						
Life expectancy at birth (years)[a]	41.7	41.9	42.1	42.3	42.9	**43.5**
Adult literacy rate (%)[b]	39.5	39.5	39.5	39.5	39.5	**39.5**
Combined enrolment rate (%)[c]	25.0	25.0	29.3	28.9	30.5	**32.6**
Real GDP per capita (dollars PPC)[d]	617	637	714	755	792	**824**
Calculating the HDI for 1999						
Life expectancy index	0.278	0.282	0.285	0.288	0.298	**0.308**
$\frac{43.5 - 25}{85.0 - 25} = 0.308$						
Educational index	0.347	0.347	0.361	0.360	0.365	**0.372**
(a) Adult literacy rate						
$\frac{39.5 - 0}{100 - 0} = 0.395$	0.395	0.395	0.395	0.395	0.395	**0.395**
(b) Combined enrolment rate for primary, secondary and tertiary education						
$\frac{32.6 - 0}{100 - 0} = 0.326$	0.250	0.250	0.293	0.289	0.305	**0.326**
(c) Educational index						
$\frac{(2x0.395) + 0.326}{3} = \frac{1.116}{3} = 0.372$						
Adjusted real GDP per capita (dollars PPP)	0.304	0.309	0.328	0.337	0.345	**0.352**
$\frac{\log(824) - \log(100)}{\log(40{,}000) - \log(100)} = 0.352$						
Human Development Index (HDI)	0.310	0.312	0.325	0.328	0.336	**0.344**
$\frac{(0.308 + 0.372 + 0.352)}{3} = \frac{1.032}{3} = 0.344$						

a) INE 1999, see Table 25, Statistical Annex
b) INE 1999, see Table 31, Statistical Annex
c) Estimate based on data and forecast by MINED/MPF
d) Estimates based on the World Bank PPP conversion rate: World Development Report, 2000/2001; World Bank Atlas, 1999-2000.

Source: INE, 1999; UNDP, 2000; World Bank, 2000/2001

Building a common denominator

As mentioned in the presentation of the methodological and conceptual framework in Chapter 1, the HDI is based on three sub-indexes regarded as indispensable for broadening individual choices. Given its composition, the index makes it possible to follow up over time the behaviour of four indicators rolled into one, as well as making comparative analyses between countries.

But comparative analysis between countries, on which is based the classification presented every year in UNDP's GHDR, demands rigorous observance of common indicators and denominators. In the case of social indicators, the task is relatively simple because it is just a case of calculating an absolute figure in years (life expectancy at birth), and percentage rates (gross enrolment rate and adult literacy rate). In both cases, the units are constant, and so need no temporal adjustment.

The indicator for economic well-being, based on per capita gross domestic product (GDP), calculated for each country in its own currency, obliges us to make a conversion into a reference unit that is common to all. Since the human development paradigm regards income as a means for acquiring goods and services that contribute to individual well-being, and not as an end in itself, the GDP has been converted into dollars in accordance with purchasing power parity ($PPP).

This means that, instead of using an exchange rate determined by the international money market, a conversion rate was used based on the implicit cost of well-bring which may be obtained through a common consumption standard, that is, a parity in purchasing power. In other words, for purposes of calculating GDP in this report, the metical is converted into dollars, not through the exchange rate, but based on an estimate of how many meticais would be needed to provide the same level of consumption that a dollar purchases in the United States.

Finally, and since the unit of calculation (that is, the currency) does not have a constant value over time, it is adjusted and presented in real terms. While a percentage or a year (the units of measurement for the social indicators mentioned above) is a unit of constant value over time, the dollar or the metical are not.

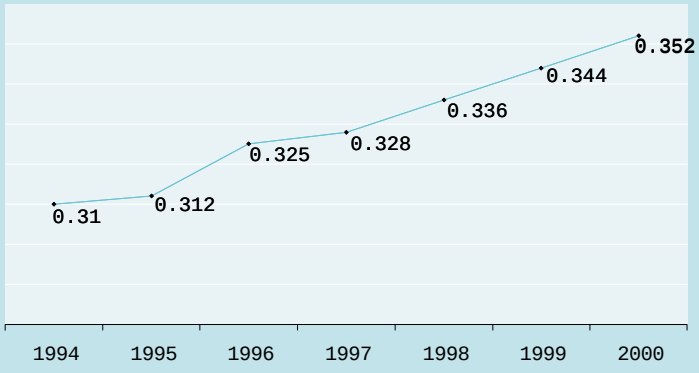
It is through this process of obtaining common denominators that the performance of the HDI of Mozambique can be analysed over time and compared with the HDI of other countries.

The 1999 national results

Based on the indicators gathered by the National Statistics Institute (INE)[3], once again a significant increase in Mozambique's HDI was noted in 1999 - a rise from 0.336 in 1998 to 0.344 in 1999, as graph 2.1 shows. The forecast for 2000, based on preliminary data and taking into account the floods that affected southern Mozambique, is that this trend continues, and the index reaches 0.352. Although these figures suggest that Mozambique will remain among the poorest countries in the world for some time to come, and

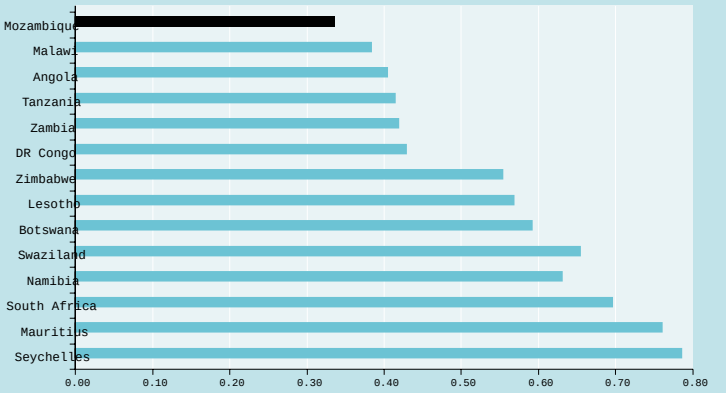
[3] Attentive readers will certainly notice a slight discrepancy between the historic series of the HDI presented in this report, and the one published in the 1999 NHDR. This difference is based on an updating of the real adjusted per capita GDP index ($ PPP), undertaken following the revision of the historic sequence of the GDP by the INE.

Graph 2.1: Evolution of the HDI in Mozambique 1994 -2000



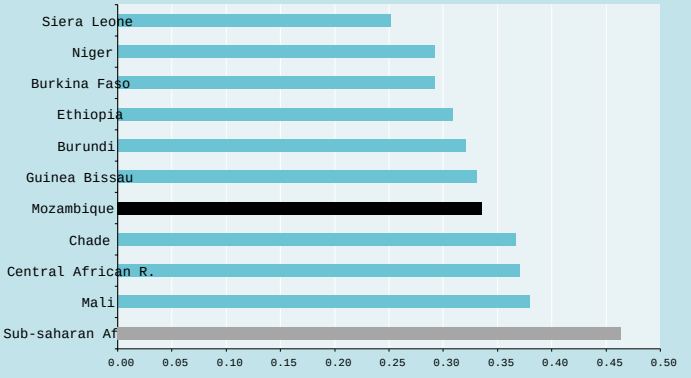
Source: Table 2.1

Graph 2.2: Human Development Index in SADC, 1998



Source: UNDP, 2000

Graph 2.3: HDI of the bottom 10 in 1998



Source: UNDP, 2000

this also depends on the performance of the other countries at the bottom of the list, the trend revealed over recent years leads us to believe that significant steps forward have been taken. Graphs 2.2 and 2.3 show the position of Mozambique in relation to southern Africa and to sub-Saharan Africa.

The debate in mozambique following the annual publication of its HDI compels us once again to warn those who receive it with visible frustration since they do not see mirrored within it the advances made on the strictly economic field. Recalling the discussion in Chapter 1, it should be noted that the very composition of the HDI means that it is not likely to change vastly from one year to the next.

Unlike GDP, the social indicators are not very dynamic and susceptible to registering major annual oscillations. The fact that the HDI of a country is lower than its economic growth rate should not, in itself, be a cause for surprise or concern. On the contrary, if economic growth is a necessary (though not sufficient) condition for human development, the present results should be viewed with optimism and renewed hope. Optimism because we have satisfied an indispensable condition for development, and hope in our ability to place growth at the service of this development.

Analysis of the three pillars of the HDI confirms once more that the GDP has indeed been the factor contributing most to the rise in the HDI. Between 1994 and 1999, per capita GDP, expressed in terms of purchasing power parity, registered an average annual growth rate of about 6%[4]. It moved from PPP$617 in 1994 to PPP$873 in 2000, causing a rise in the adjusted real GDP index from 0.304 to 0.352 in the same period. Preliminary estimates show that this indicator could

[4] It should be noted that the GDP average annual growth rate, calculated in $ PPP, is lower than the economic growth rate in dollars at constant prices.

rise to 0.362 in the year 2000 if the impact of floods in the economy does not turn out to be greater than anticipated.

As for the life expectancy at birth index, between 1994 and 1999 this rose from 41.7 to 43.5 years - that is, an average annual increase of less than 1%. However, as from 1998 we note that the rate of growth of this indicator has increased significantly, and it is expected that the trend verified since then and envisaged for 2000 can be maintained. But for this it will be necessary to hold back the spread of HIV/AIDS which, according to recent studies, could reverse the gains made in this area. Chapter 4 analyses the impact of HIV/AIDS on education in Mozambique. The life expectancy at birth index was 0.308 in 1999, and is expected to reach 0.313 in 2000.

The education index has remained relatively stable in the 1994-1999 period. The adult literacy rate (the least dynamic of the indicators that make up the HDI) has contributed greatly to this, since it has remained unchanged at 39.5% since 1994. Since this indicator has a weighting of two thirds in the composition of the education index, any change must of necessity depend on efforts undertaken in favour of literacy teaching. As for the gross combined enrolment rate, with a weighing of a third in the composition of the education index, important steps have been taken as a result of the investment made in this sector since 1994.

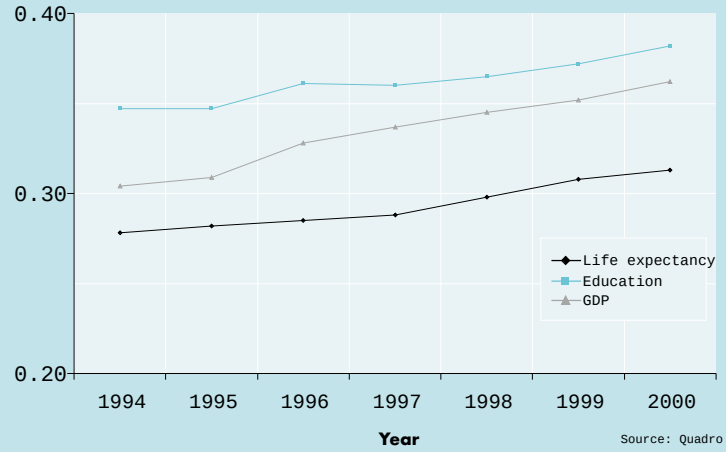
Human development in the provinces

The provincial GDP

One of the innovations of the 1999 NHDR was the analysis of the human development of the 11 administrative regions of the country. For this purpose, a methodology was worked out which allowed the disaggregation of the approximate contribution of each province to the overall Gross Domestic Product (GDP) of the country.

The disaggregation of the GDP has a dual objective. On the one hand, it makes it possible to provide an indication of the economic dynamics of each of the 11 regions, and on the other it opens a path to measuring development based on an estimate of the HDI of each province. The

Graph 2.4: Evolution of the HDI components, 1994 - 2000



Source: Quadro 2.1

Table 2.2: Gross Domestic Product, at constant prices (10^6 Meticais)

Province/ Region	1996 GDP	1997 GDP	1998 GDP	1999 GDP
North	**6,923,354**	**8,239,110**	**9,045,114**	**9,529,977**
1 Niassa	851,320	1,010,647	1,043,723	1,157,470
2 C. Delgado	1,703,512	1,729,364	2,119,771	2,243,942
3 Nampula	4,368,522	5,499,099	5,881,620	6,128,565
Centre	**9,883,145**	**10,874,368**	**11,567,360**	**12,419,602**
4 Zambezia	3,459,833	3,725,359	3,577,155	3,935,153
5 Tete	1,322,442	1,584,918	1,592,168	1,812,749
6 Manica	1,386,607	1,690,609	2,152,707	2,258,368
7 Sofala	3,714,262	3,873,482	4,245,330	4,413,333
South	**15,912,101**	**17,226,856**	**20,055,655**	**21,700,471**
8 Inhambane	1,712,886	1,854,280	1,997,981	2,236,407
9 Gaza	1,376,768	1,640,230	1,859,335	2,033,004
10 Map. Prov.	1,111,357	1,614,415	1,693,543	2,253,687
11 Map. City	11,711,090	12,117,931	14,504,796	15,177,373
Total National	**32,718,599**	**36,340,334**	**40,668,130**	**43,650,051**

Source: INE,1999

current report uses the methodology developed then, with some pertinent adjustments, to estimate the provincial GDP for 1999, and at the same time to update the 1996-1999 temporal series. The methodology is explained in detail in Technical Note 1.

Table 2.2 summarises the main results of the estimates of the national GDP broken down by province at 1996 prices.

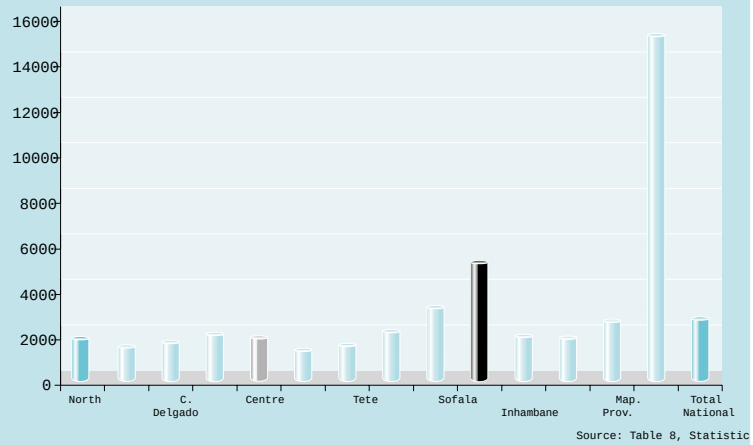
The data in table 2.1 show that, in 1999, about 49% of production was concentrated in the southern region. Pride of place in this region goes to Maputo city with a contribution to production of about 35%. The central zone follows with 29%, and finally the northern region with 22%. Sofala and Zambezia provinces in the centre, and Nampula in the north head their regions, with contributions of 10.5%, 9.8% and 14.4% respectively. The remaining provinces contribute between 2.7% (Niassa) and 5% (Cabo Delgado and Inhambane). (See also tables 11, 12, 13 and 14 in the Statistical Appendix).

Agriculture remains the activity with the greatest weight in the economy, at both national and regional level, but its participation has been declining over the years under study in favour of other sectors such as industry and trade. While in 1997 this sector accounted for about 24.9% of GDP, in 1999 the contribution of agriculture to total production was 24.2%. Over the same period, manufacturing industry underwent a slight growth, rising from 9.9% in 1997 to 11.1% in 1999.

At regional level, the results from the southern zone show a clear domination of commerce over the other sectors of economic activity throughout the period under analysis. In 1999, this sector represented 20.1% of the entire production of the southern region, against 18.4% for agriculture, 13.2% for construction, and 12.2% for manufacturing industry. Both in the centre and in the north agriculture dominated with a participation of 32.2% and 47.6% respectively. Trade followed, with a contribution of 19.9% in the central region, and 11.4% in the north.

In terms of per capita GDP shown in graph 2.5, the Maputo City figure is six times larger than the national average, and 11 times that of the Zambezia per capita GDP. It is 10 times that of niassa and Tete, and 9 times that of Cabo Delgado and Gaza. Maputo city and Sofala province have per capita GDPs higher than the national average - but even so, one should note that the Maputo City figure is five times greater than that of sofala.

Graph 2.5: Real GDP per capita (10^3 meticais), 1999



Source: Table 8, Statistic

Estimate of the provincial HDIs

Different denominators

In working out the disaggregation of the HDI by province, the authors of this report faced a methodological dilemma concerning the selection of a common denominator for per capita income. We could have

calculated per capita GDP in dollars, using the conversion rate based on purchasing power parity used in the national index.

This option would allow the comparison of the provincial indexes with those of other countries but, due to the fragmentation of the Mozambican economy,resort to a single conversion rate for all the provinces could introduce a high margin of error which would inevitably distance us from the reality we wished to capture in the indices.

The alternative would be to use the per capita GDPs in Mozambican currency in order to avoid distortion of the results obtained. Since we regard the comparison between provinces and regions within Mozambique as more relevant and pertinent, we are thus resorting to calculating the provincial; indices based on the per capita GDP in meticais. Hence the provincial results analysed here cannot be compared with those of other countries.

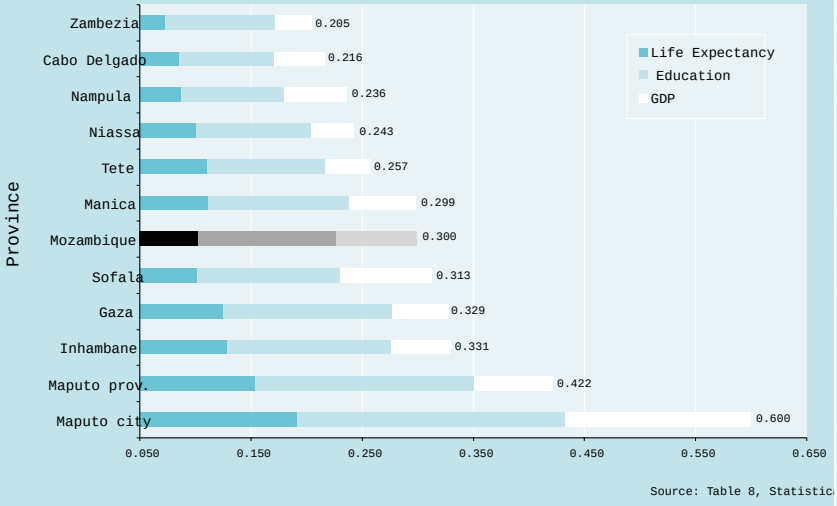
Finally, it is important to mention that the minimum and maximum values used in calculating the annual per capita GDP indices have been adjusted annually by using the GDP deflator for the first time, and taking 1996 as the base year.

The 1999 provincial results

According to the most recent data compiled by the National Statistics Institute, the Human Development Indexes ascertained in the 11 administrative regions reached the levels presented in graph 2.6. These figures reveal significant variation around the national HDI located at 0.300.

Sofala, Gaza, Inhambane, and Maputo province and Maputo City have figures that are above the national average. Of particular note is Maputo city where the HDI is twice the national index. On the other hand, and with less sharp variations, Zambezia, Cabo

Graph 2.6: Human Development Index by province and composition, 1999



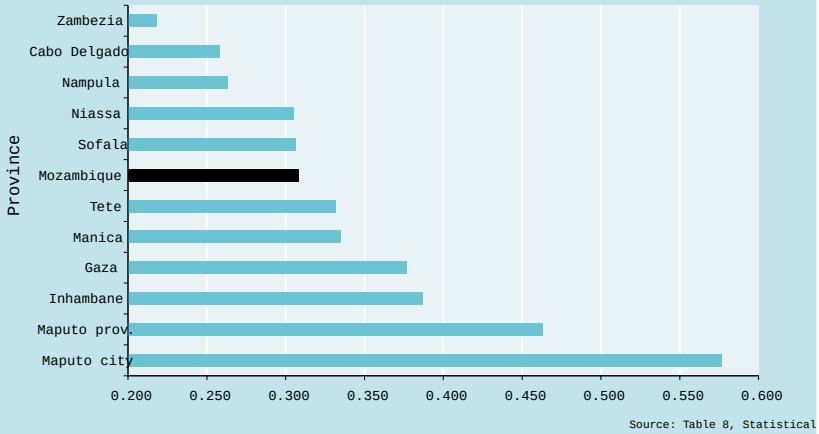
Source: Table 8, Statistic

Delgado, Nampula, Niassa, Tete and Manica provinces are below the national average.

In the context of the debate about varying development levels across Mozambique, it is perhaps important to note that - with the exceptions of Maputo City and Province - the other provincial figures are very close to the national HDI, and thus when taken together are all very low.

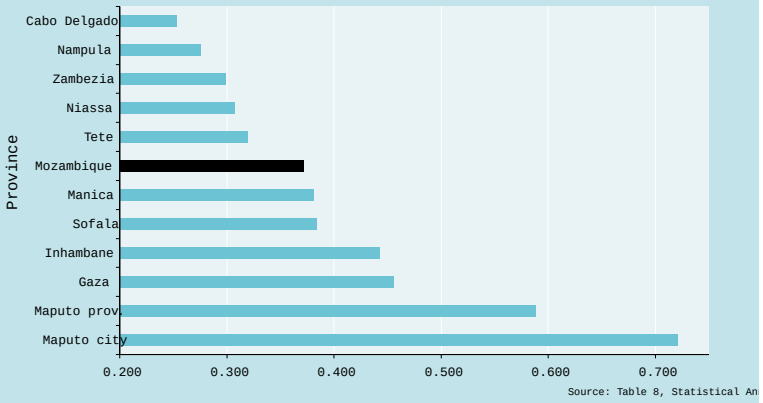
As the numbers presented here suggest, regional asymmetries do indeed exist but,

Graph 2.7: Life expectancy index,1999

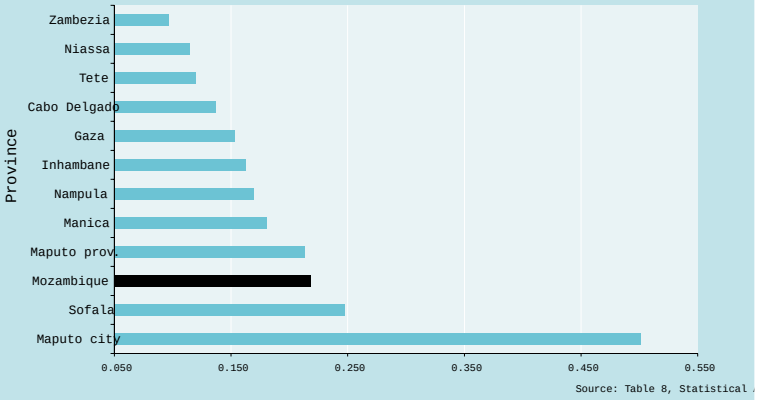


Source: Table 8, Statistical

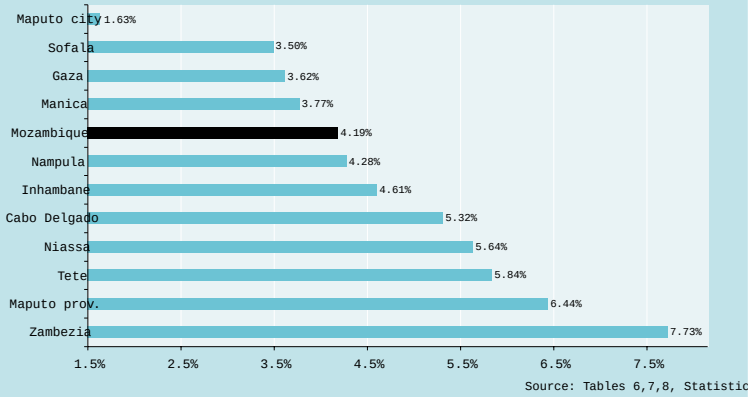
Graph 2.8: Educational index, 1999



Graph 2.9: Real GDP per capita index, 1999



Graph 2.10: Variation in provincial HDI between 1998-1999



given the scale and extension of poverty throughout the vast national territory, we should resist the temptation of allowing this debate to distance us from the central theme, which is generalised poverty. The reduction in regional asymmetries, an objective enshrined in the government programme for 2000-2005, gains in force in so far as the levelling advocated is in an upwards direction, and not around the current national average.

Trends in provincial results

Comparing the 1999 results with those for 1998, there was an increase in the national HDI from 0.288 to 0.300, which is a rise of 4.2%. Of the 11 administrative regions, six showed a performance above this national average (Inhambane, Niassa, Cabo Delgado, Tete, Zambezia and Maputo Province), while the other five (Gaza, Nampula, Manica, Sofala and Maputo City) showed a percentage rise that was below the average.

With the exception of Manica, the provinces with an index lower than the national HDI, enjoyed a rate of growth higher than that of the country, and approached the national average. The provinces with an index higher than the national HDI, with the exception of Maputo Province and Inhambane, had a rate of increase lower than the national average. Should this trend be maintained, the results point to a declining provincial variation around a rising national HDI - that is, a levelling upwards, accompanied by a concomitant reduction in regional asymmetries.

Analysis of the components of the provincial HDIs shows a positive and relatively uniform variation in the education and health indices. As we had occasion to mention earlier, these indices

Table 2.3: Provinces with performance above the national average, 1998/1999

	Life expectancy index			Educational index			GDP per capita index		
	1998	1999	variation	1998	1999	variation	1998	1999	variation
Zambezia	0.208	0.218	**4.80%**	0.289	0.3	**3.80%**	0.073	0.096	**31.50%**
Maputo prov.	0.452	0.463	**2.60%**	0.575	0.589	**2.40%**	0.162	0.213	**31.60%**
Tete	0.322	0.332	**3.10%**	0.316	0.32	**1.40%**	0.092	0.12	**30.80%**
Niassa	0.295	0.305	**3.40%**	0.303	0.308	**1.60%**	0.091	0.115	**26.50%**
Cabo Delgado	0.248	0.258	**4.00%**	0.249	0.254	**2.20%**	0.12	0.137	**14.50%**
Inhambane	0.375	0.387	**3.10%**	0.436	0.443	**1.60%**	0.137	0.162	**18.30%**
Nampula	0.257	0.263	**2.60%**	0.268	0.276	**2.90%**	0.155	0.17	**9.40%**
Mozambique	**0.298**	**0.308**	**3.40%**	**0.365**	**0.372**	**1.90%**	**0.199**	**0.218**	**9.50%**

Source: Tables 5 - 7, Statistical Annex

are not very dynamic, and are thus not likely to show major annual oscillations.

Among the six provinces whose performance was above the national figure, the factor that contributed most towards the results was their per capita GDP indices. Indeed, the three regions with the greatest percentage increase in their HDIs (Zambezia, Maputo Province and Tete) all recorded high rates of growth of their GDPs.

In the case of Maputo province, the impact of the MOZAL project had a determinant weight in the 28% increase in its real per capita GDP. In Tete, for its part, the resumption of mining at Moatize provided an 11.1% increase in its real per capita GDP. In Zambezia province there was more diversified economic growth, with large contributions from electricity, public administration, education, health and agriculture. The scale of the Mozambican economy, and of its constituent parts, makes very clear the weight that a gigantic project can have on the national or regional economy.

Among the group of provinces with a performance below the national figure, one notes poor performance in the education index, as well as, in relative terms, in the per capita GDP index in Manica, Sofala and Maputo city.

One should note that the poor performance of the Manica and Sofala economies in 1999, with growth rates of 1.8% and 1.9% respectively, reflects the economic crisis in neighbouring Zimbabwe. The strong economic links between these two provinces and Zimbabwe, notably through the services provided to Zimbabwe by the Beira Corridor, makes this region particularly sensitive to how the Zimbabwean economy develops.

Table 2.4: Provinces with performance below the national average, 1998/1999

	Life expectancy index			Educational index			GDP per capita index		
	1998	1999	variation	1998	1999	variation	1998	1999	variation
Mozambique	0.298	0.308	**3.40%**	0.365	0.372	**1.90%**	0.199	0.218	**9.50%**
Manica	0.325	0.335	**3.10%**	0.373	0.382	**2.20%**	0.166	0.18	**8.60%**
Gaza	0.367	0.377	**2.70%**	0.453	0.456	**0.60%**	0.132	0.154	**16.50%**
Sofala	0.297	0.307	**3.40%**	0.377	0.384	**1.90%**	0.233	0.247	**6.20%**
Maputo city	0.567	0.577	**1.80%**	0.719	0.721	**0.30%**	0.485	0.502	**3.50%**

Source: Tables 5 - 7, Statistical Annex

Origin, evolution and challenges of education

Throughout history different societies have ensured their reproduction and development largely through education. By means of this social practice, young people are inserted into collective life, appropriating the values and knowledge of their society. In this way, education plays a fundamental role in creating cultural identity and social cohesion, while at the same time ensuring the process of humanisation in each individual.

The school, as we know it today, arose in the context of the socio-political and economic transformations that took place in the 18th and 19th centuries, giving birth to a new model of society which was extended to all countries of the planet. The fundamental purpose of this school was to contribute to the creation and consolidation of the unity of the emerging nations, and to inculcate in the new generations the knowledge, skills and attitudes needed by the new organisation of politics and of social production. Education became one of the main motors for the development of societies, because of its contribution to scientific and technological processes, a decisive factor for economic growth.

During the last quarter of the 20th century, major and complex transformations took place in the world in all spheres of social life. These transformations were due, in part, to scientific and technological innovations which radically altered productive processes, and changed the organisation and information of societies, making technical and scientific knowledge increasingly decisive and determinant for the socio-economic development of countries. In this new context, wealth and well-being depend more on technical and scientific knowledge than on natural resources. While many natural resources are running out, society's technical and scientific knowledge makes possible, and indeed favours, the rational and sustainable exploitation of resources.

The advances and innovations that have taken place in productive processes place human beings at the centre of development, because these transformations "are caused, before all else, by the ability of human beings to dominate and organise the environment around their needs". Recognition of the decisive role of education puts it "at the centre of the development both of persons and of communities". It has "the mission of making everyone, without exception, bring forth their talents and creative potential" (Delors, 1996: 15).

The pace of scientific and technological transformation means that the way we see and interact with the world changes over a period of time much shorter than a generation. From this fact arise new and urgent educational needs which, in part, demand far reaching changes in educational practices themselves. Education should promote a posture of dialogue between individuals and communities throughout their lives, resulting in intelligent behaviour capable of interacting in a responsible and constructive manner in a context of permanent change.

In all sectors of economic and social life, the need is felt for evolving skills articulated with more up-to-date knowledge and know-how. Knowledge is relevant for practice, and empowers people's abilities to be actively involved in the various spheres of social life. In this sense, education is the main route into the world of work.

The need to train people capable of evolving, of adapting to a world undergoing rapid change, and to master those changes, is increasingly imperative. From this perspective, the ability to learn throughout life becomes crucial. Schools should direct their training function so as to ensure that their pupils learn how to learn. This new context demands that societies multiply and diversify educational opportunities, becoming genuine "educational societies". New information technologies, when integrated into education, can transform this utopia into a reality.

In an increasingly globalised world, the strengthening of internal cohesion within nations, becomes an imperative necessity. Fragmented societies will find it difficult to survive contact with globalisation. This survival demands the conservation and development of the unique cultural features that allow a society to recognise itself and to enter into relationships with other societies free of any complexes. However, it is important to understand that no society can live closed in upon itself - this demands an ability to relate to the world and to other societies.

In this context, education recovers its importance and necessity. The modern school arose in history as a priority instrument for the construction of national identity. This identity and cohesion must be developed from the recognition of the cultural pluralism within society. Education must therefore "make individuals aware of their roots, in order to provide them with reference points whereby they can locate themselves in the world", but it must also promote knowledge and respect for other cultures. These culturally unique variations are the common heritage of humanity (Delors, 1996: 42). Thus the school bears the responsibility for building a world of pluralism and solidarity.

Miguel Buendia and Virgilio Juvane

The contribution of education to human development

Education, in all its various aspects, plays a determinant role in development. The concept of human development regards people's educational level as one of the most important measurable dimensions that express a society's level of development.

As mentioned in Chapter 1, educated people are better able to innovate and to adopt increasingly productive methods that allow them to lead decent, creative and longer lives, under conditions in which, as it is popularly said, "life is worth living". In their special contribution that opens this chapter, Buendia and Juvane draw our attention to the basic fact that educated people have the necessary instruments to fight against social exclusion, they can influence decisions that affect their lives, and are capable of receiving and sharing information, thus contributing to enriching the knowledge and cultural heritage of humanity.

The school education system allows the social dissemination of knowledge in an effective, efficient and consensual manner. Apart from the transmission of scientific knowledge that allows individuals to "jump stages" in the learning process, education also performs an important function in their socialisation. The school should, in principle, be inspired in family and community education so that, apart from skills, it inculcates in the new generations socially important values, and shapes attitudes such as self-discipline, pride in one's work, flexibility, the spirit of openness, and willingness to cooperate with others (UNDP, 1996: 51).

Recognition of the importance of school education in development culminated in its promotion to the realm of fundamental rights, enshrined in the Universal Declaration of Human Rights. Article 26 of this international statement of principles defends the right to education without discrimination, and establishes compulsory free basic education for all citizens of any particular country. The definition of what constitutes "basic education" is left to the discretion of each country, in accordance with its capacities, resources and priorities[5]. In the case of Mozambique, basic education, which it is intended gradually to make universal, covers the seven grades that constitute primary education.

In its essentials, the concept of human development pursues this ideal, stressing education in the development of individuals and of nations, and drawing attention to the observance of this right through its various measuring instruments discussed in Chapters 1 and 2.

It is important to stress that the approach to education in the context of human development is substantially different from the economist perspective of "human resources", because this stresses the role of education in training "human capital". From the human resources approach, the function of education is merely to develop skills, in order to make people more productive and innovative and, as the investment that it is, the merit of educating or not educating a population does not derive from social dictates, but

[5] The declaration of the International Conference on Education for All of Jomtien in 1990 provides an important subsidy to this definition. The conference defined basic education as essential instruments such as the ability to read, write, oral expression, make basic calculations, solution of problems as well as practical technological knowledge, development of skills to live and work with dignity, participate fully in development, improve the quality of life, make important decisions and the ability to continue to learn.

from its perceived social or individual rate of return.

But the concept of human development takes the premise that education is one of the basic dimensions of development, since it constitutes an inescapable choice of people, irrespective of their wealth or social status. Thus learning is regarded as being of intrinsic development value, because it makes it possible to expand the abilities of people to make informed choices about their lives, regardless of whether these abilities will or will not be applied in increased production and in innovation.

In the human development approach, school education is only of value when it genuinely contributes to expanding the general well-being of people in its broadest sense. Thus education is transformed into an end in itself. The lack of educational provision is a privation which should provoke an analysis of the causes and lead, whenever possible, to corrective action on the part of governments and of society at large (UNDP, 1996: 54-55).

School education is a priority and an indispensable instrument in combatting exclusion and social discrimination. As the 1996 Global Human Development Report (GHDR) shows, education can be a vehicle through which the equitable distribution of resources is guaranteed. For example, when the possibility of qualified personnel using their knowledge to demand more privileges is restricted through an increase in the number of trained people, then the gap in incomes may also be reduced, thus contributing to social stability (UNDP, 1996).

A further example lies in providing schooling for girls and women, a process that liberates the beneficiaries, at the same time as opening spaces and opportunities for their economic and social participation, the fundamental condition for reducing the levels of privation that effect this social group, which is the majority of the population.

The present chapter analyses the trajectory of education as an important component in broadening the choices of Mozambicans. The chapter begins with a brief survey of the trajectory of education during the colonial period in Mozambique. It then discusses in detail the various stages in the effort to provide Mozambicans with a right that was denied them during colonial rule.

The chapter identifies and analyses what, from the perspective of its authors, are the main bottlenecks in the Mozambican education system, and the main challenges posed to the sector, taking into account the internal dynamics, but above all the reality of a world undergoing continual and rapid transformation.

There are multiple challenges and they concern broadening access to education, reforming its content, the programmatic, social and economic constraints, reduction of external dependence and the effort to make the school a relevant instrument for the development process in its broadest sense.

The trajectory of education in the choices of Mozambicans

The clash of logics and visions of education systems

During their history, Mozambicans have experienced two separate periods in terms of the objectives and content of, and access to, school education. During the colonial period, official education was used basically as a vehicle of domination, becoming one of the factors that helped to

shape a nationalist awareness. The post-independence period which began in 1975 was characterised by gambling on mass entry into education so as "to make the school a base for the people to take power", as urged by the slogan of the time, cited in Machili's special contribution that closes this chapter.

Like any other human collective units, African communities, over their history, developed educational practices and systems that made possible the transmission of knowledge and values, thus guaranteeing their reproduction and development.

For centuries, the education of the majority of the Mozambican population was based on a model characterised by its integration into the totality of life, and by its close connection with the natural and social environment. This type of education was effective in its function of guaranteeing the socialisation of new generations through the transmission of values, knowledge and practices accumulated throughout the history of the various communities (Dias, 1990: 283).

According to Mondlane, traditional and pre-colonial education, because it was integrated in the reproduction of lifestyle and of African world views, catered better for the needs: "The great virtues of the African pre-colonial education were mainly that it was oriented towards the needs of society, it was fully integrated, and it was aimed at everyone equally" (Mondlane, 1975: 196).

Unfortunately, the positive aspects of this source of knowledge accumulated over centuries, were not, nor could they be, made use of, for reasons inherent to the very nature of the colonial system. First, it was not the vocation of the colonial regime to care about the all-round development of Mozambicans; and second, the modernist version of colonial education was designed only as an instrument for broadening capacities in aspects where this consolidated cultural alienation and served to perpetuate domination over Mozambicans.

In this context, it is understandable that the colonial system purely and simply ignored the existence of "native" education. To legitimise domination required the denial of the history and the knowledge, in short the culture, of African societies, and the use of educational institutions as instruments to "civilise" and "nationalise" the natives (Hedges, 1999).

Indeed, of all the methods aimed at depriving the natives of Mozambique of their human development, education is among those that perhaps best reflects the deliberate policy of exclusion. The educational system implanted in the territory bore the stigma of domination that it enshrined, not only in the contempt for the knowledge and values of the indigenous population, but also in limiting access, and in blocking the progress of the few who managed to enter this education system.

It thus comes as no surprise to find that, when Mozambique became independent in 1975, about 93% of its 10 million inhabitants had not enjoyed access to the "modern" school. This fact is one of the indicators that reflect the low level of "modernisation" that the colonial regime managed to implant in the territory, and the "underdeveloped" nature of Portuguese colonialism itself. Since the development of this colonialism rested on the exploitation of cheap labour, it could dispense with generalising school education.

The nationalist perspective on education and the challenges of independence

Throughout the 1960s, there was a relative increase in the numbers attending school, particularly primary and technical education, in the suburban and rural areas

A glance at the numbers of colonial education

Box 3.1

There was a clear domination of the education system by the Catholic Church, particularly in so-called "rudimentary education". The Catholic schools stood out in terms of numbers of pupils: of the 183,092 pupils enrolled in 1954, about 94 per cent, or 172,213, were in the Catholic missionary schools.

At the time there were 1,419 "rudimentary schools", of which 96 per cent, or 1,356 schools, were Catholic. Out of the 1,620 teachers in these schools, 95 per cent (1,543) were employed in the Catholic schools.

Despite the "civilising mission" of Portuguese colonialism, in 1955 less than 20% of Mozambican children aged between 5 and 14 were in the official schools. The number of schools was very small for the needs. In that year there were just 155 primary schools, with 388 teachers and 15,517 pupils.

According to UNESCO data published in 1958, primary education (official and missionary) had 3,172 schools, 4,361 teachers, and 415,611 pupils enrolled. At this time Mozambique had an estimated population of 5.73 million inhabitants. Hence there was an average of one primary school for 1,809 inhabitants, with 95 pupils per teacher.

As for secondary education, there were 4,636 pupils in high school, of whom only 34, or less than one per cent, were Africans. There were 4,621 pupils in technical education, and the number of Africans in these schools was 183, which is about 4 per cent.

Just 10 black people attended higher education, in universities in Portugal.

There were also arts and crafts schools (the elementary level of technical education) intended for the "natives", mainly for the children of chiefs. In 1954, there were 65 elementary professional schools, of which 51 were run by priests, with 3,814 pupils.

Secondary schools were located only in the cities. In the 1960s, in all of Mozambique there were just 5 secondary schools - 3 high schools and 2 technical schools (commercial and industrial) - in what was then Lourenço Marques (today's Maputo), Beira and Inhambane. The highest levels of technical education and of the high schools were reserved for the children of settlers and of the "assimilated", mainly for the former. For example, in 1960, out of a school population of 1,000 pupils in the Salazar High School in Lourenço Marques, there were only 30 Africans, all of them children of "assimilated" blacks.

Not only was the colonial education system inefficient and not very large, but there were sharp regional imbalances. In terms of schools, the south of the country was always better served than the north. In 1973, Lourenço Marques district had 10% of the country's population, and its school network covered 50% of the population of school age. But in Zambezia and Nampula, in the centre and north of the country, which each accounted for 20% of the population, the coverage rate was only 26% and 31% respectively.

In 1962, there were six official high schools and 26 private ones. Eleven years later, in 1973, there were 74 schools for the first and second years of high school education, of which 51 taught up to 5th grade and a few as far as 7th grade. Even in 1973, almost at the end of the colonial regime, only 27% of the pupils enrolled in general secondary education were Africans.

Schools at the highest level of education were clearly intended for the settlers and for a few assimilated blacks: they were the most modern schools, with the most sophisticated buildings, and they were well equipped. While the number of Africans in primary education declined, the higher one went in the system, in secondary education their number was virtually insignificant.

In consonance with the established discrimination, the few African pupils who managed to pass the barrier of primary education, were mostly channelled to the lowest levels of professional training. And when they managed to reach secondary education, they were usually channelled to the technical schools. In 1967, for instance, of the African pupils enrolled in secondary education, 70% were in the technical schools.

A further problem was the shortage of qualified teachers. Only 21% of the teachers in high school secondary education in 1967 were qualified. But in the government high schools, all the teachers had university degrees. In 1969, the pass rates from the 2nd, 5th and 7th years of high school were 62%, 41% and 55% respectively. Furthermore, the general education offered was extremely "fact-based", and was regarded as inadequate, even for Portugal. In the technical secondary schools, the pass rate was 56% in commercial education, and 31% in industrial schools.

University education began only in 1963, and was almost entirely aimed at the children of settlers. In 1973, only 1.3% - that is 40 out of 3,000 students - were black. In its initial years the university only offered natural science courses.

Once they had passed the university entrance exam, the pupils had the right to a scholarship to a university in Portugal, when the course they wanted to study did not exist in the colony. Because of this, a small, but important, group of Mozambicans attended Portuguese universities, where they came into contact with students from the other Portuguese colonies, forming what would become a nucleus of African intellectuals who had an important role in organising and advancing the nationalist struggles in the colonies.

But the Portuguese government would not allow African students to attend non-Portuguese universities, in a clear attempt to prevent them from making contact with anti-colonial political organisations in other countries which could have consolidated nationalist feelings. Those who did study in universities in other European countries, or in American institutions, were obliged to leave the country clandestinely and go into exile.

The contribution of the University of Lourenço Marques to the country's development was very limited. Investment in basic research and on the specific problems of Mozambique was tiny. When the country achieved its independence, the vast majority of university students and graduates joined the exodus of settlers who left Mozambique and went to Portugal.

Adapted from Buendia, 1999: 66-73

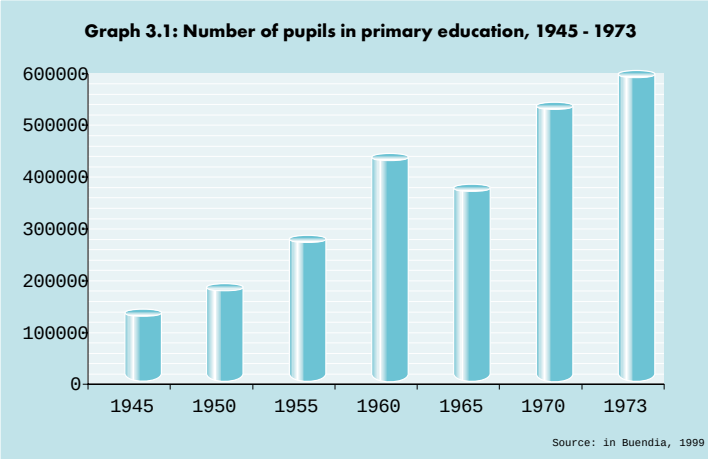
where the influence of the nationalist movement made itself felt. This change in educational policy can be interpreted as an attempt by the regime to legitimise itself in the eyes of the African population and of the world, and thus slam the brakes on the advance of the national liberation movement. Another important objective was to attend to the training needs demanded by the timid project of modernising the economy, which began in that decade (Buendia, 1999).

The national liberation movement (1962-1974) posed education as one of the basic conditions for the construction and development of the Mozambican nation. Together with the political model of the nation-state, the liberation movement adopted the "modern" school. This educational project fundamentally rested on the scientific rationale of modernity, presented as the only valid form of knowledge, disqualifying all other knowledge.

The educational perspective that the Mozambique Liberation Front (FRELIMO) developed during the liberation war tried to distance itself from the educational concept of the colonial school in terms of objectives, models and practices.

FRELIMO's critique of the colonial education stressed that it was irrelevant and inappropriate to the needs of Mozambicans "not only because it reached few Africans, but also because the instruction given to those few was totally alien to the needs of Mozambique" (Mondlane, 1975: 196). The critique stressed the alienating character of the education programmes, because they promoted the distancing of pupils from their socio-cultural roots and reality, leading them to despise African values, and to adopt the values of the coloniser.

However, the critique recognised the merit of the colonial school in offering the colonised the instrument needed to know how to act in a situation very different from that of "traditional" society, providing them with the codes that enabled them to understand the surrounding environment and the new social dynamic better.

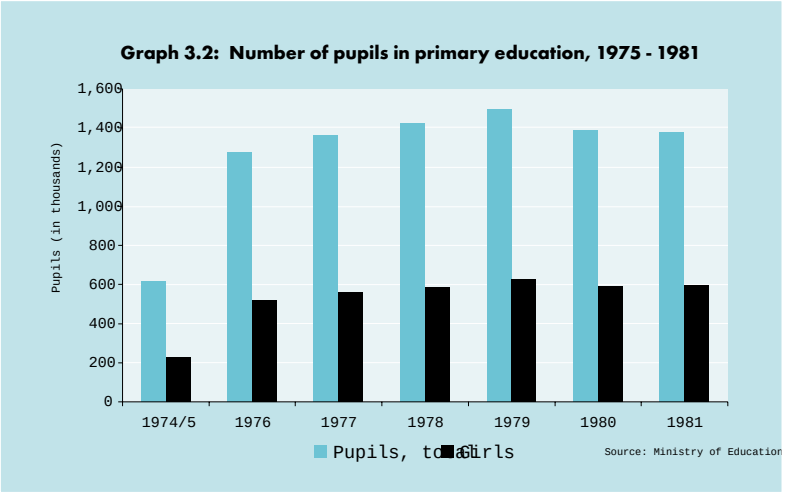


The recognition of the pertinence of "native" education was, however, mediated through the ideals of modernity assumed by the liberation movement. While, on the one hand, the nationalist perspective recognised the pertinence and force of the objectives and values of traditional education, on the other hand, it believed it necessary to adopt the school of "modernity" so as to meet the demands arising from nation building, and from the political and economic insertion of independent Mozambique into the world concert of nations.

Evolution of enrolment after independence

With national independence, a process of rapid and profound socio-economic, political and cultural changes began. One of the first effects of these transformations was the expansion of educational supply.

The sector underwent a significant expansion of the school network, particularly in primary education, covering



broad segments of the population who had previously been excluded. The nationalisation of schools, decreed immediately after independence, was intended to eliminate the various factors of social discrimination, and ensure the democratisation of access to school, with the purpose of consolidating national identity and unity.

Between 1975 and 1981 there was a significant increase in the number of pupils in primary education, which grew at an average annual rate of 15.6%, advancing from 600,000 pupils in 1975 to over 1.4 million in 1979. One notes that expansion of access went together with an increase in the percentage of girls in the system.

The number of girls in the system rose from 33% of the total in 1975, to almost 44% in 1981, as shown in graph 3.2. The expansion in access was also the product of a substantial increase in the number of schools.

At the same time, literacy campaigns for the adult population took place in residential areas and workplaces. They contributed to a fall in the illiteracy rate from 93% in 1975 to 72% in 1980, mainly in the urban areas, and in organised sectors of the rural areas.

However, it is pertinent to mention that the way in which nationalisation took place led to a withdrawal from participation of some of the social actors who had been involved in education, notably religious bodies and private agents, leaving the state with the exclusive responsibility for educating Mozambicans.

The nature of the transformation and constraints of the system

There were also qualitative aspects to the transformations in the education system. The educational project of independent Mozambique intended not only to broaden access, but also to expand the educational experience of the national liberation struggle. School for all should contribute to rescuing the dignity of the Mozambican people, valuing their culture and their history. It should be a privileged social space for the formation of the nation, cultivating national identity and national unity.

The alterations undertaken in the education system have allowed Mozambican children, youths and adults to be able to study the history and geography of their own country, rather than the history and geography of the colonial metropolis. In this sense, education played, in this period, an important role in creating and developing a national awareness.

As a space for promoting knowledge, the school in all its levels and branches bore the responsibility of ensuring access to the accumulated technical and scientific knowledge of humanity, as a fundamental and decisive instrument in the fight against misery, a condition sine qua non for the promotion of development.

New forms of management that implied the involvement and participation

of pupils, teachers and the community in the life of the school were introduced. It was intended that the school should be a centre of democratic learning, where all were called upon to discuss and take part in the solution of problems. These aims and objectives frequently clashed with authoritarian educational practices and school management.

Throughout the country initiatives and experiences of interaction between schools and communities appeared but often did not have enough continuity to become consolidated. Sometimes this relationship was limited to the work which communities undertook in building and cleaning schools. But there were few schools which turned the relationship with their respective communities into moments for mutual learning.

It is important to note that this effort to make education a mass phenomenon had its ups and downs. On the one hand, the nationalisation of education did establish the conditions for eliminating social and racial discrimination, and to broaden access. But on the other, it led to statist management of the educational system, and provoked a cooling of the impetus of popular participation which had marked the initial years of independence.

The question that may be posed is: if the objective of this whole effort was to expand access and establish a bridge between modernity and culture, what then explains this slowdown? There are several reasons.

Adopting the political and scientific ideology of modernity in practice ended up by making the relationship between modern education and traditional education complicated and difficult. Throughout the history of post-independence education it is difficult to find examples in the schools of interaction and dialogue between the logic of modernity and that of tradition on a footing of equality.

Mozambican educators and leaders always stressed the need to insert the school, socially and culturally, in the community. However, 25 years after independence, Mozambican schools in general remain without roots in the communities where they are physically located. The local population, particularly the peasants, still regard schools as something strange, in that they transmit world visions and values that are very different from their own thinking (Khoi, 1990: 328), and make little contribution to the transformation of their lives.

So it is not strange that, despite a great deal of effort and a few good experiences, schools remain alien, and in many cases foreign, to communities. If they formally accept the school, this is because the fact of schooling is a condition and pre-requisite for hypothetical social mobility and status, which ends up educating new generations outside of their culture and community in terms of attitudes, practices and values instead of doing the reverse.

As mentioned above, the school/education was slotted into the ideology of modernity, which gives to science and technology the mission of freeing humanity and societies from the darkness of obscurantism. But this option, as it was and is interpreted, ended up sustaining practices that marginalise the culture of the majority of Mozambican communities that the school should serve, thus widening the chasm that separates the "modern" and "traditional" sectors of society.

Furthermore, the objectives of education and the working methods in the schools were based on educational experiences developed during the liberation struggle. One of their basic goals was to create within the pupils the love of their country

and to develop their political awareness, that is, their sense of responsibility towards the common good (Buendia, 1997: 352).

But these noble intentions rested on the fragile premise that the educational experience of the liberated areas, very localised and conditioned by the dynamic of the liberation war, could be transferred to the entire country by decree. This theoretical and practical assumption was, in large measure, a result of the voluntarist attitude that was highly generalised at the time, and drew its inspiration from the radical nature of the social transformations under way.

The Prospective Indicative Plan and the National Education System

The end of the armed conflict in Rhodesia, and the climate of peace that was expected for the region, allowed Mozambique to draw up a national development plan, aimed at eliminating poverty and reducing the imbalances inherited from the colonial past. This was the context for the design and introduction in 1983 of the National Education System (SNE). It was envisaged that the system would be closely linked to the approaches and perspectives on social and economic development laid down in the Prospective Indicative Plan (PPI). This set as its target "victory over underdevelopment" within a single decade.

The SNE advocated the gradual introduction of compulsory and universal education in the first seven grades for children of school age. The system also prioritised training in technical education so as to guarantee the supply of skilled labour needed by the various projects that formed part of the PPI. The programme allotted a fundamental role to literacy and adult education, as a prerequisite for eradicating poverty, and improving living conditions for workers in both rural and urban areas, and in order to increase access to professional and technical training, thus laying the foundations of technical and scientific knowledge necessary for increased production and productivity.

The SNE attributed a fundamental role to upgrading teachers of basic education, and so established a training sub-system divided into two levels (basic and mid-level), and the higher education sub-system with the aim of training the staff necessary for leading and managing the various social and economic sectors, and for the promotion and development of scientific research (RPM, 1985).

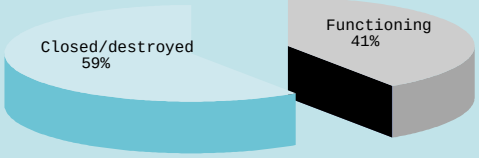
However, due to external factors, and to factors within the education system itself, many of the innovations intended by the educational reform were not put into practice.

Other programmatic constraints

The SNE was introduced during a troubled social and political period, marked by a serious economic crisis, and by the destruction of social and economic infrastructures and disintegration caused by the war.

Furthermore, it is pertinent to acknowledge that the limited capacity to direct and control effectively the system, together with the feeble institutional organisation of the schools were important constraints on the success of many of the

Graph 3.3 Primary schools closed/destroyed, 1992



Source: Ministry of Educ

Organisation and structure of the National Education System (SNE)

Box 3.2

The National Education system is structured into pre-school education, school education, and out-of-school education, as the following diagram shows:

Pre-school education
Pre-school education is that which takes place in creches and playgrounds for children under six years old. It is to complement or supplement education within the family with which it should, in principle, cooperate closely.

School education
School education consists of:
- General Education
- Technical and Professional Education
- Higher Education.

Apart from the education provided in the educational establishments mentioned earlier, school education also includes special modes of education, namely:
- Special education
- Vocational education
- Adult education
- Distance learning
- Teacher training.

Each of these modes is an integral part of school education, but is governed by special provisions.

Out-of-school education
Out-of-school education is that which includes literacy and educational improvement activities, cultural and scientific updating, and which takes place outside of the regular education system.

Characterisation of School Education
General Education
Primary education covers the first seven grades (5 + 2), divided into two levels:
- 1st level, from 1st to 5th grades (EP1)
- 2nd level, 6th and 7th grades (EP2).

The secondary level of general education covers five grades (3 + 2) and is divided into two cycles:
- 1st cycle, from 8th to 10th grades (ESG1)
- 2nd cycle, 11th and 12th grades (ESG2).

Technical and Professional Education
Technical and Professional Education contains the following levels:
- Elementary
- Basic
- Mid-level.

Higher Education
Higher education is aimed at those who have graduated with 12th grade of general education, or the equivalent, and is undertaken in universities, higher institutes, higher schools and academies.

Special Modes of Education
Special Education: this consists of the education of children and young people with physical, sensor and mental disabilities, or with behavioural or learning difficulties. In principle, it takes place in special classes within the regular schools.

Teacher training: the training of teachers for general and for technical and professional education takes place in specialised institutions. The training of teachers is structured into three levels:

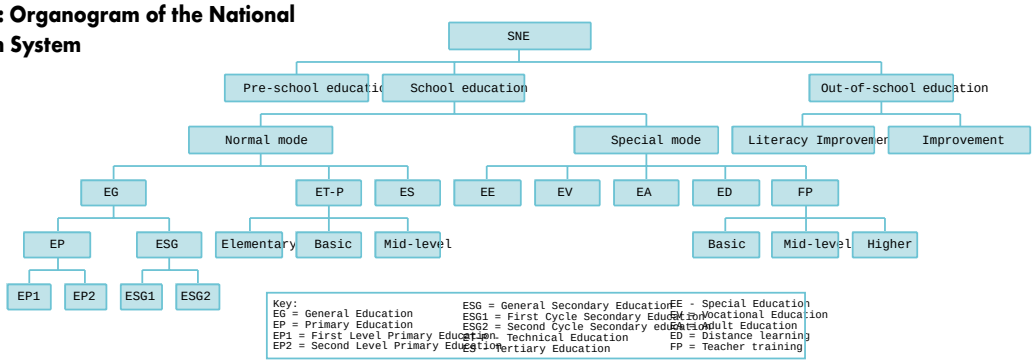
Basic level: initial training for teachers of first level primary education. Entry requirements at this level are 7th grade or the equivalent.

Mid-level: initial training for teachers of 2nd level primary education, and for teachers of subjects in technical and professional education. Entry requirements at this level are 10th grade of general education or the equivalent.

Higher level: Initial training for teachers at all levels of education. Entry requirements at this level are 12th grade of general education.

Adult education: this is organised for individuals who are older than the normal age for attending general and technical and professional education. This mode of education is also aimed at those individuals who had no opportunity to join the school education system at the normal age, or who did not conclude their studies.

Table 3.1: Organogram of the National Education System



innovations that it was intended to achieve. Also, experience and knowledge of the socio-cultural reality into which the educational programmes were inserted was at a very early stage, as was the capacity to plan, direct and manage the educational system and the schools.

For instance, contrary to what was proposed, it was not possible to generalise second level primary education (EP2), which should have completed the cycle of the seven grades of basic education. The major factor behind this failure was the way in which the curriculum structure at this level of education was designed. The structure required several teachers per class: right from the start this made implanting and implementing EP2 a non-starter, particularly in rural areas.

Although it formed part of primary education, the curriculum for EP2 was designed more as the first level of secondary education than the last level of primary education. It should have combined both, but with a greater stress on the primary. In addition, the basic education curriculum did not take into consideration the cultural logic and practices of the various communities. It also stressed transplanting values and visions characteristic of urban areas.

Furthermore, insufficient involvement of teachers in curriculum reform led to them resisting the introduction of new educational methodologies, particularly for teaching Portuguese and mathematics. It was soon noted that introducing the methodology of teaching Portuguese as a second language did not solve the problem of learning Portuguese, particularly among the children of peasant families. Thus the problem of education as a factor in reproducing social inequality was not solved.

The results from adult literacy classes in rural areas were increasingly disappointing, showing that the choice of Portuguese as the medium of education was not the most appropriate. A still greater problem was that the educational programmes were not relevant to the specific needs of the various communities, and thus discouraged adults from remaining in the learning process.

Teacher training, declared as strategic and fundamental for implementing the educational reform was also out of line with the content, methodologies and learning strategies advocated by the basic education curriculum.

Taking these limitations into account, one can understand why, although it was one of the main reasons behind the 1983 educational reform, the inefficiency of the system, expressed in high failure and repetition rates, remained largely unaltered, despite the introduction of new programmes and methodologies into education and the fact that the pupils now had textbooks.

Assessing the limitations of the impact of the 1983 educational reform is to recognise the pertinence of the critical positions and arguments which at the time advised against introducing a new educational system. These positions were based on findings on the ground which showed that the appropriate organisational and institutional conditions to guarantee a successful education reform did not yet exist. Here, as in other areas, the political will overrode the technical rationale.

The combined impact on education of political instability and economic crisis

In the mid-1980s, the climate of political instability in the country worsened, provoking a major exodus of the rural

National languages in official education

An illustration of how national languages were marginalised for a long time is the lack of official data on exactly how many of them there are. This derives either from lack of knowledge of the real linguistic situation, or from theoretical issues or issues of definition (for example, language versus dialect). The current official version of the linguistic situation is provided by the INE (1999), which groups the dominant languages in the 11 administrative regions, as shown by Map 3.1.

These 18 languages (19, if the official language, Portuguese, is included) are those which a person travelling through the country could encounter, and which could help him communicate, socialise and even survive in each of these regions.

In Mozambique today, the advantages and disadvantages of integrating the national languages into the official education system are being debated. The main argument of the sceptical school is that 19 languages in one country is too many to incorporate into the education system. Resistance against making full use of Mozambican languages in the transmission of knowledge is strange, particularly if we recognise that contemporary history shows us that none of the seven most developed countries in the world reached its current level of prosperity by using foreign languages as the main medium of education.

The exclusion of national languages from the education system in Mozambique is, in my view, a mistaken choice. To acquire the ability to read and write, to become literate in the language that one masters best, that is, in one's mother tongue, is an elementary right of human beings.

But the majority of Mozambican children are obliged to become literate in what is, technically speaking, a foreign language, despite the official statistics which show that Portuguese is the mother tongue of only 6.5% of the 17 million Mozambicans (INE, 1999).

This means that, through an act of coercive pedagogy, children are grouped into rooms where they are forced to accept that they don't know what they know (for example, how to count up to 10 or 20 in their mother tongue), because they don't know how to do it in Portuguese. They are forced to translate what they already know into the official language, in order to show the aptitude which entitles them to progress along the system. This is not only pedagogically painful, but can even be seen as completely absurd.

Map 3.1: Main languages spoken in Mozambique by province

Source: INE, 1997

Illiterate Mozambicans, whether they are peasants or are exiled in urban apartment blocks, have to become aware that social opportunities can be created in any language, and above all that the development of the country needs the participation of everyone, armed with knowledge that allows them to master the world. This is only possible when that knowledge is also extended to their languages, and is not limited strictly to understanding an alien language.

It is known that some of the children whose mother tongue is not Portuguese spend three years at school without advancing from one grade to the next. Apart from the waste of resources, the immediate consequence of this is the huge drop-out rate - or, for those who persist, the late conclusion of first level primary education (5th grade), when they are about 15 or 16 years old. In the cities the average age for concluding 5th grade is 11.

The drama of those who waste their first three school years without passing their grade because of the current system of education is that, even if they manage to remain in the system, they will never conclude 12th grade before they are 18, the age when, in theory, they should be recruited for military service. This situation has profound implications for the future of those concerned. For example, these military recruits cannot aspire to become officers, since only those who have completed mid-level education are eligible for officer status. This is a requirement that

few people of peasant origin can meet.

It is my modest opinion that instead of children wasting time for three years in the same grade, because of the language, they should have two or three years to learn Portuguese, while at the same time progressing in what they know how to do in their mother tongue: basic arithmetic, interpretation of their surrounding environment, etc.

After two or three years spent learning Portuguese, in principle the children will have sufficient fluency for Portuguese to become the medium of education without prejudice to their linguistic or intellectual development. Thus, without wasting any year (or every year in the case of disillusioned dropouts), it would be guaranteed that at the age of 11 or 12, Mozambican children, both in the countryside and in the city, would conclude at least 5th grade.

Nor are the financial motives that are frequently cited a convincing explanation for excluding national languages. The costs of the ignorance induced by the exclusion of national languages are undoubtedly greater than what would be spent on introducing them into education. It is enough just to think of the fate of the children who stop studying when they are 9 or 10 after failing first grade two or three times, or the fate of youngsters who take 5th grade when they are 15 or 16 and cannot continue to study because they are "adults" and do not have priority in EP2 schools. These children are serious candidates for the ranks of the absolutely poor: they are relegated to the margins of society, they marry early, etc.

Furthermore, Portuguese, instead of becoming in political practice the much proclaimed language of national unity, is instead increasingly a language of exclusion at various levels, since without knowing Portuguese it is, for example, difficult to enter the labour market.

Even in the political sphere there is a trend to exclusion. Politicians who are not fluent in Portuguese, no matter how brilliant they may be, feel hindered, not only from expressing their ideas, inside and outside parliament, but from following and understanding the debates, because they have a feeble grasp of the official language. This removes the content from their role as legislators, and as monitors of governance. From the first multi-party parliament up to now, the number of deputies who take part in debates in plenary sessions, can be counted on the fingers of two hands. Most of the 250 deputies just clap, raise their voting cards, and occasionally close their sleepy eyes.

The messages intended to reach the majority of Mozambicans through health education leaflets on effective ways of preventing and combatting malaria, cholera, sexually transmitted diseases (STDs), including HIV/AIDS, cannot reach people who do not speak Portuguese. The best way of helping people broaden their horizons of knowledge is school education, and the best medium for education is their mother tongue. One of the explanations for the lack of success of the literacy campaigns launched in the late 1970s is the fact that they did not use mother tongues.

Valuing national languages should not be circumscribed merely to their educational advantages, since they are also the most important medium of culture, which is one of the fundamental elements of a Mozambican identity and expression. It is utopian to imagine that we are going to enter the global village empty-handed. Mozambicans have the right to take pride in what is theirs. If human development is concerned with broadening people's choices, then language teaching is an essential choice which cannot be denied to Mozambicans.

Investing in the introduction of national languages into the education system is a way of combatting absolute poverty, marginalisation, premature marriages - phenomena which have extremely high social costs. It is also a way of helping consolidate a Mozambican identity, as well as the all-round development of Mozambicans.

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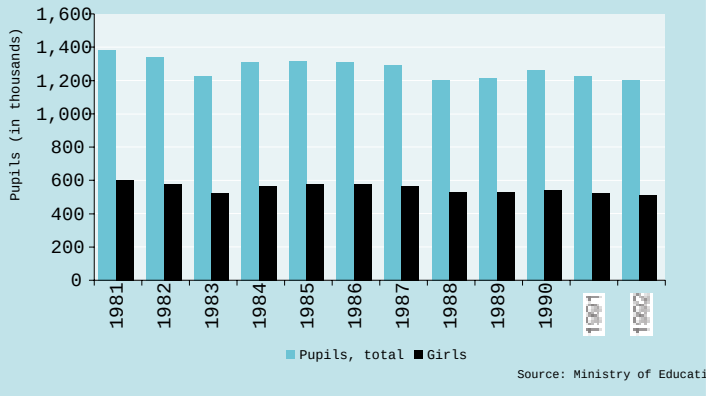
Graph 3.4: Number of pupils in primary education, 1981-1992



population, which impacted negatively on the development of the school network.

Material destruction, the disintegration of social life, and the subsequent economic crisis largely explain the period of stagnation through which the education system passed in the late 1980s and early 1990s. In such a context, many schools were not viable, from a material point of view.

With so much collapse and destruction, one may even ask to what extent the very raison d'etre of the school had not disappeared.

The effects of the war were so severe that in 1992 there were slightly more than 1.2 million pupils in primary education - the same figure as in 1983, as shown in graph 3.4.

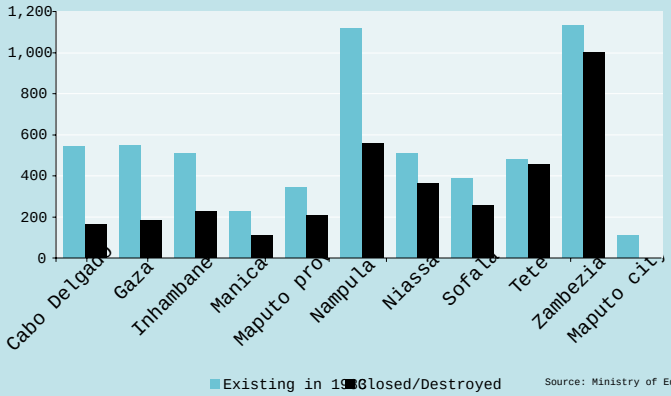
The balance sheet drawn up in 1987, after the introduction of 5th grade, showed that the conditions existing and forecast in 1983 when the process began, had changed radically.

In the areas that were not directly affected by the war, stagnation resulted, directly or indirectly, from a combination of the following factors: excessive centralisation of management together with weak capacity for supervision and control; inadequate training of teachers and management staff, particularly at local level; the socio-cultural distance between the schools and the communities, as a result of which the population felt no motivation to provide support.

It is important to mention that the negative effects of the war were not expressed in a uniform fashion across the entire country. As Graph 3.5 shows, some parts of the country were more affected than others: and up to today this factor has influenced overall schooling levels, when measured by province. Graph 3.5 clearly shows that Tete and Zambezia provinces suffered the destruction or closure of the greater part of their school infrastructure, followed in order of severity by Sofala, Niassa, Nampula and Maputo.

It is important to note that the development of education in this period was also influenced by the social and economic impact of the Structural Adjustment Programme (PRE) as from 1987. This factor in particular led to a profound deterioration in the conditions under which schools and teachers were operating, because of the recommended

Graph 3.5: Number of schools existing 1983 and closed by1992

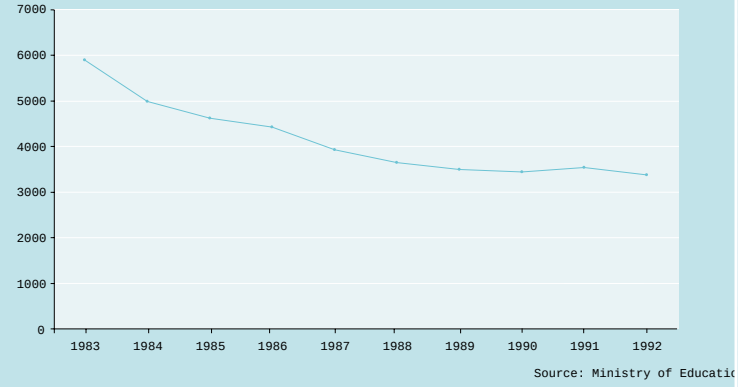


restrictions on public expenditure in order to correct the economic and financial imbalances (as discussed in the final section of this chapter).

Indeed, the worsening war, and the impact of the structural adjustment programme as from 1987, with negative impact shown in the reduction, in real terms, of education budgets, issued strong signals that the project of compulsory schooling for seven grades was beginning to look non-viable.

It should be mentioned that, although the school network and the number of pupils in the system had shrunk during the period in question, the overall population of the country continued to grow at an average annual rate of about 2%. The population

Graph 3.6: Number of EP1 institutions, 1983-92



aged between 6 and 18 was continuing to grow at a rate of 3.7% per annum, thus increasing the pressure on the weak and limited educational infrastructure.

The rules of the PRE worsened the funding conditions for a sector that was already suffering from the diversion of resources away from the social sectors to support the war into which the country had been plunged.

By way of example, in 1987 education accounted for only 4% of the General State Budget (including both the recurrent budget and the capital budget), contrasting with an average of about 12% over the previous seven years. Between 1980 and 1986, the recurrent budget for education represented between 17% and 19% of the total recurrent state budget. In 1987, this percentage fell sharply to 9%, which did not allow an expansion of supply in a system which had already seen a reduction in its number of functioning units (MINED, 1990).

But the crisis did not prevent educators and planners from developing deeper knowledge about the problems and challenges of the sector. Over this same period, prognoses and perspectives seeking to overcome stagnation were developed, which made it possible to accumulate knowledge that would serve as a basis for designing policies and strategies for relaunching the education sector in the post-war period.

This national effort was still further empowered by the contributions and perspectives of the International "Education for All" Conference held at Jomtien in 1990, which re-awakened international awareness of the need to place education at the centre of the major concerns and priorities on the social development agendas of governments and of international cooperation.

These national perspectives and a world context that was favourable for reactivating the education sector could have little immediate practical effect, given the war that the country was still living through.

Educational trends in the post-war period

At the end of the 1980s signs appeared on the political horizon giving hope that peace was possible and near. In this new context, the education sector relaunched the challenge of universal primary education begun in 1983 with the introduction of the SNE. In this context, a model was designed on the basis of which several scenarios were projected for the evolution of pupil numbers in primary and secondary education. Micro-planning and the school map were introduced into the planning of education in order to estimate with greater rigour local needs for the development of education.

The gross admission rate declined from 1981 to 1992, reaching its lowest point, of 60%, in 1991/92. Since then the trend for the gross admission rate has been upwards, but by 1999 it had not yet regained the levels of 1981, as shown in graph 3.7.

The number of pupils enrolled stagnated during the war. With the General Peace Agreement, signed in Rome in 1992, the country found political stability again. The trend for the number of pupils enrolled, and the rate of new admissions, became positive.

The Education Strategic Plan

After the first multiparty elections in 1994, the government that emerged from the elections set out overall policies aimed at

normalising and rebuilding the country's social and economic life. In the initial phase, this stressed the establishment of a stable macro-economic framework, in accordance with the economic paradigm that inspires the rules and conditions of the International Monetary Fund (IMF) and the World Bank.

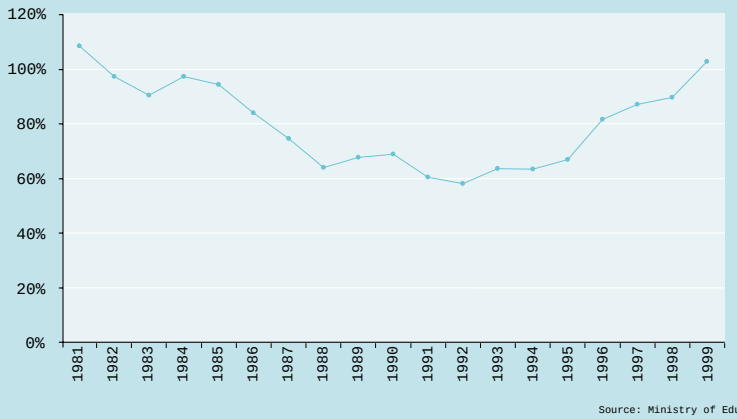
The 1995 National Education Policy (PNE), forming part of the overall programme of the post-election government, laid down the objectives and the main lines of action for the education sector. In turn these guided that reflections and debates that resulting in drawing up the Education Strategic Plan.

By 1993/94, as Graph 3.7 shows, the levels of schooling were dropping, because of the instability imposed by the war together with the destruction of schools and the reduction in the number of teachers. But this was followed by a period of consistent and continual growth up to 1999. However, although in absolute terms, the number of pupils in EP1 in 1999 was higher than that recorded in 1981, this growth has not yet led to recovering the capacity for schooling that the system had achieved in 1981 in terms of the universe of pupils that constituted the aggregate demand.

The admission rate, which is an indicator through which one can measure the system's supply capacity, confirms the finding that there has been a real loss of the opportunity for access to education which Mozambican children had earlier gained. Graph 3.8 shows this reality.

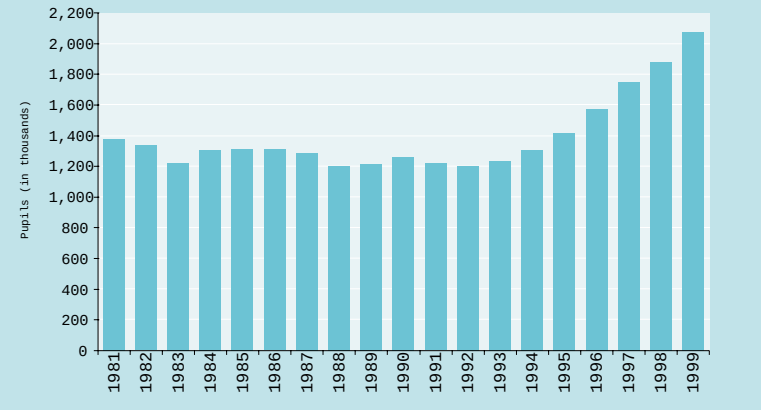
In 1981, EP1 was able to offer 400,000 places for new entries to first grade. This capacity represented a gross admission rate of 110% - that is, the system had virtually achieved universal entry into primary education.

Graph 3.7: Gross admission rate, 1981–1999



Source: Ministry of Educati

Graph 3.8: Number of pupils enrolled, 1981- 1999

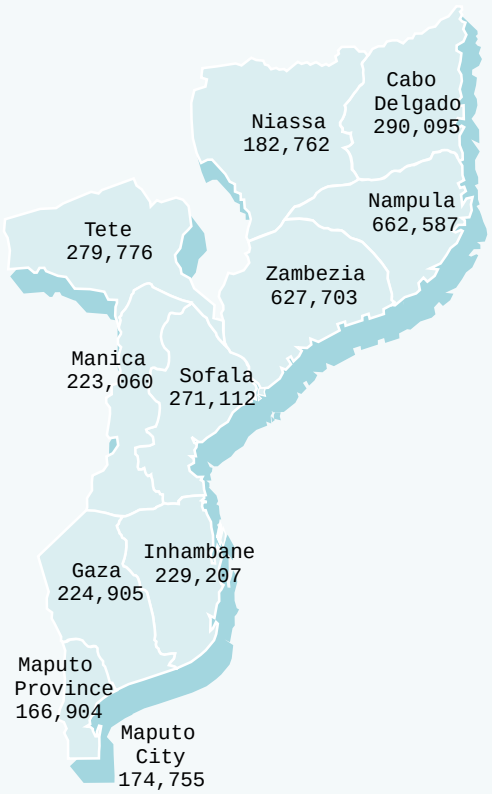


Source: Ministry of Education

But in the following years, the war and the economic crisis drastically cut admission capacity, so that in 1992 the system was only making 300,000 places available for new entries into primary education.

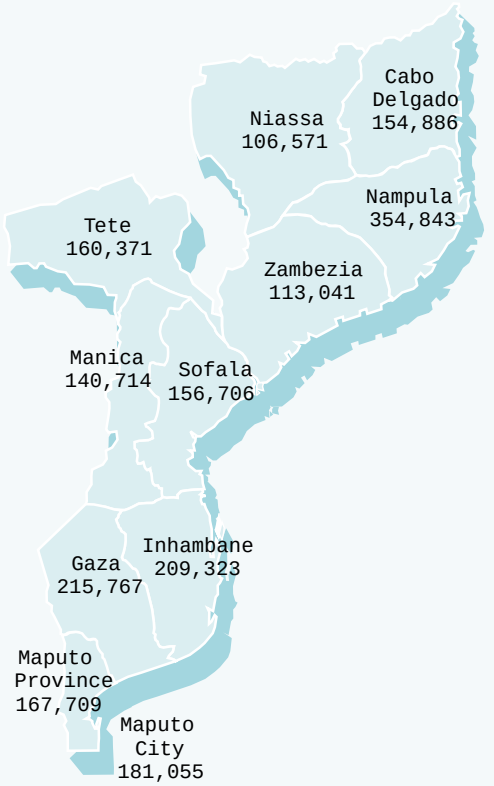
Maps 3.2 and 3.3, together with graph 3.10, try to illustrate levels of schooling by province. For this purpose map 3.2 shows the distribution of the population of school old enough to be in primary education, while map 3.3 shows the distribution of those pupile who, according to Education Ministry statistics, are actually studying in EP1 and EP2.

Map 3.2: Projected number of children aged between 6 - 12 years,1999



Source: INE, 1999

Map 3.3: Aggregate number of pupils in EP1 and EP2 by province,1999



Source: MINED, 2000

Despite the provincial asymmetries evident in terms of schooling, it is recognised that the government and the international community have made efforts to increase the number of schools through rebuilding the damaged or semi-destroyed ones, and building new schools, resulting in a substantial increase in supply and hence of pupils.

Although it is unlikely, in the short term, that we shall see universal access to primary education, and a declaration that it is compulsory for all citizens, there is a need to reduce the age range of pupils in primary school, bringing it down to the normal age for attending this level of education, and gradually reducing late entries. Thus the pupils who attended 1st grade in 1999 were of ages that varied from six to 15. Some 32.2% were seven years old, while the number who were aged six - the legal age for admission - only accounted for 17.2% of the total.

Analysis of the various levels of education

Primary education

First and second level primary education (EP1 and EP2), which, in the spirit of the law on the SNE, should be the levels of

Education Strategic Plan: what is it?

Box 3.3

In August 1995, the Mozambican government approved the National Education Policy (PNE), a document which sets out the vision of the education sector, and the main intentions and priorities for developing it.

It became immediately evident that in itself the PNE would not be sufficient to make operational the policies defined in a framework of actions and interventions to be undertaken. On the basis of this understanding, a process was started of translating the political intentions proclaimed by the government into a prioritised framework of activities and fundamental transformations of the National Education System (SNE).

The Education Strategic Plan (PEE) is an instrument for planning and mobilising resources on a rolling basis, and it has no pretension of solving all the problems of the SNE at the same time. The PEE may be characterised as a plan centred on priorities, and hence with limited options. From its design and content, one may state that the PEE had the merit of distinguishing not only what should be done but, above all, what could be done.

The content of the PEE rests on three pillars:

- increasing access and equity;
- improving the quality and relevance of education;
- strengthening the institutional capacity of the Ministry of Education at the various levels of administration, without which it is recognised that the two basic priorities of the system cannot be carried out sustainably.

The PEE takes up once more the major priority defined in the government's education policy - basic education, expressed in the two levels of primary education, complemented by literacy and adult education activities. Although the priority of the PNE and the PEE at this stage is basic education, government strategy for the education sector recognises the relative importance of the other levels of education, which is seen as an indispensable condition to lend balance and harmonious development to the system as a whole.

As an instrument for mobilising resources domestically and internationally, the PEE bases its financial requirements on a Medium Term Expenditure Scenario, which expresses the recurrent and capital expenditure to be undertaken in a temporal horizon initially set as five years.

In the government's understanding, the expenditure scenario should lead to a financial plan which expresses, in the first instance, the levels of contribution projected on the basis of internal resources, which cover the state budget and other domestic funding sources; and secondly, hypotheses of funding based on grants, which is a form of aid that is not reimbursable; and finally, the funding levels projected that are based on credits or loans.

Out of the total cost of the PEE, estimated at 717 million US dollars, it is assumed that the government's contribution over the period will represent about 60%. The resources will be applied in the first place to cover recurrent expenses, particularly wages.

The PEE was conceived as an integrated sectoral plan, in a framework that would allow the replacement of project-centred foreign funding by support for the state budget. This intention, broadly shared by the government and its cooperation partners, is a major challenge, since experience shows that both the government and the cooperation partners experience difficulties in harmonising their practices, procedures, and the culture of administering and managing financial resources.

The higher education sub-system also developed a sub-sector strategy, which will contribute to completing and establishing an integrated vision of the education sector, and will certainly facilitate negotiation, mobilisation and distribution of resources between the various levels of the SNE.

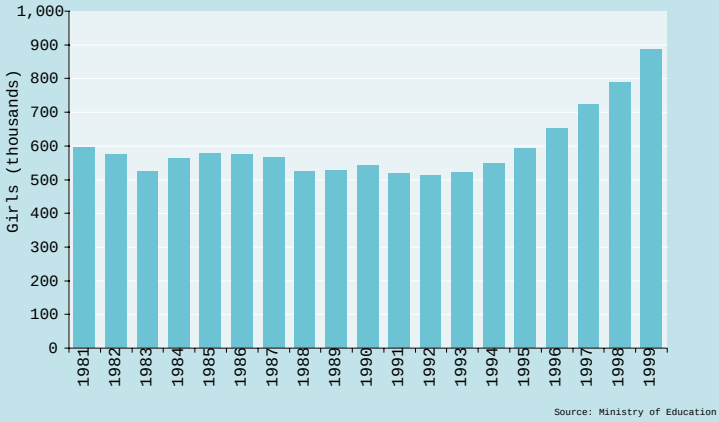
The formulation of the PEE, including the higher education sub-sector strategy, was always defined as an exercise which should lead to a broad social undertaking to catalyse development in different political contexts.

The major challenge, however, seems to lie in implementation, and in the recognised need to locate the centre of gravity of the system in the school, which is where the fundamental changes should occur. The implementation of the PEE should be a process of learning leaner, more participatory and decentralised management.

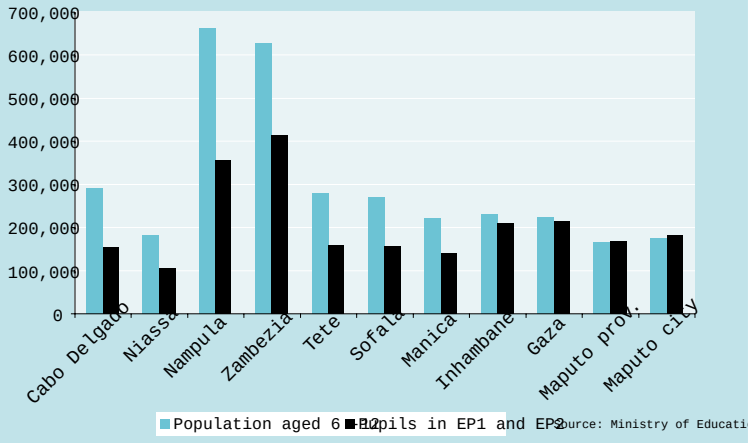
compulsory education, show a level of supply below the existing needs. On the basis of the 1999 educational statistics, it is estimated that only 37% of children - that is, 37% of those aged between 6 and 12 - are attending the two levels of primary education. As one can conclude from observing maps 3.2 and 3.3, there are great disparities in access between the various provinces, resulting from limitations on the supply of places in the system.

This data shows that the expansion in possibilities of access to educational services is less rapid than the strong demographic growth - which is why less than half of children of school age,

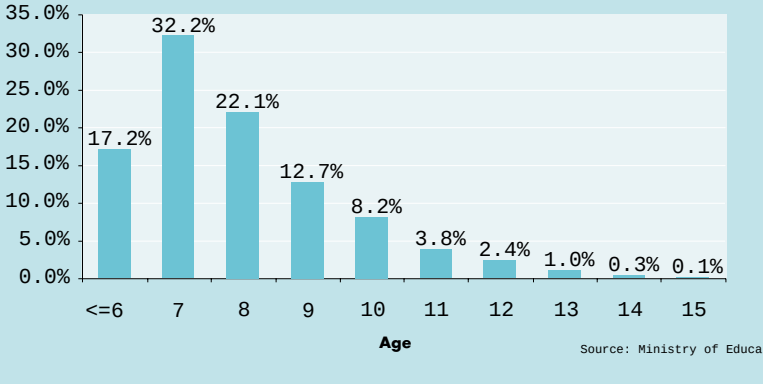
Graph 3.9: Number of girl pupils, 1981-1999



Graph 3.10: Population aged 6-12, and pupils in EP1/EP2



Graph 3.11: Age distribution of 1st grade pupils, 1999



between six and 12 years old, are actually attending primary education.

In 1983 and 1992 there were two important changes affecting the age structure for admissions to 1st grade.

In the first case, under the introduction of the SNE in 1983, the legal age for admission to 1st grade was set at seven, although the law also allowed the admission of six-year-olds, if they had attended crèches. But this opening favoured children in urban areas who had the chance of attending pre-school educational establishments.

The second case was the revision of the SNE law in 1992, which brought down the age for admission to 1st grade to six.

Analysis of the available data leads us to the following conclusions:

- The age range of 1st grade pupils has the same characteristics and trends as in 1983;
- Bringing down the admission age to six did not lead to changes in the age structure of 1st grade pupils, where the modal age remains seven.

The two earlier findings suggest that although there is a trend towards an increased number of six year old pupils in recent years, it should be noted that this phenomenon is essentially urban.

In rural areas, despite the progress in expanding opportunities for access to education, there still remain problems concerning the location of supply compared to demand - or the location of the schools compared to where the pupils live. In many of Mozambique's rural areas, schools are set up and endowed with teachers - but are inaccessible because of the distances which the pupils must travel to reach them. This seems to be the main obstacle to a rapid increase in the percentage of six year olds attending 1st grade.

Repetition and its implications

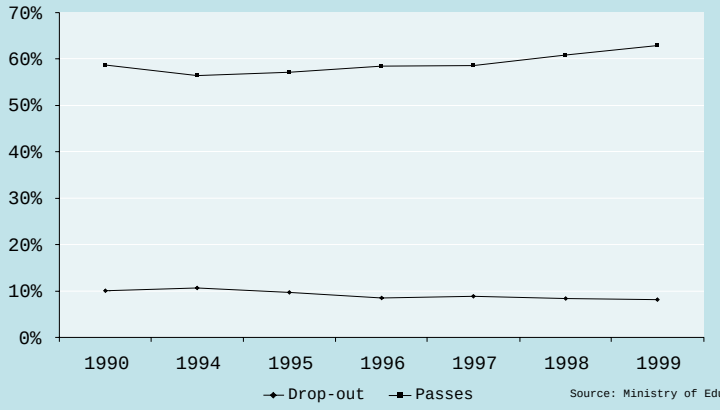
One of the serious problems facing the education system, particularly primary education, is the high level of repetition. Strangely enough, repetition maintains much the same qualitative weight in different educational contexts. Graphs 3.12 and 3.13 illustrate trend in the number of pupils passing, dropping out and repeating years in primary education.

In a series of 13 consecutive years the proportion of students repeating years in EP1 is invariably around 25% of the EP1 school population. The weight of repetition that occurred in a period of instability due to the war and the effects of PRE remained the same after the end of the war and in a period when the country's economy has started to show clear signs of recovery.

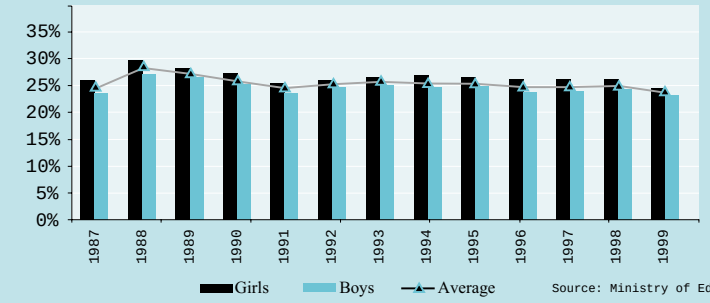
Although the indices of school waste are influenced by socio-economic variables that do not depend on the action of educational specialists, the decision as to whether the pupil passes the grade or repeats the year is the responsibility of the teachers. Thus repetition rates bear an intrinsic relationship with educational policies and practices.

The new basic education curriculum, designed in the context of the reforms advocated by the government's new strategic vision, proposes a complete seven-grade primary school, more articulated and integrated from the point of view of content; it also proposes a profound change from a teacher-centred pedagogic practice to more active learning which regards the pupils themselves as the subjects of the process. To complement these measures in the scope of the new curriculum, learning organised in cycles is proposed, accompanied by new pedagogic and pupil assessment practices.

Graph 3.12: Pass and drop-out rate, 1990 - 1999



Graph 3.13: Evolution of the proportion of pupils repeating years in EP1, by gender



The language of instruction is certainly another problem that the Mozambican primary school must solve in order to improve its efficiency. This aspect is dealt with in Special Contribution 2, and in Box 3.6. As Joseph Poth, who is in charge of UNESCO's LINGUAPAX Project, has said, "an education that separates the child from the language spoken in his family, is one of the main causes of repeating years and dropping out of school." The results of research undertaken in Mozambique and in other countries confirms that the mother tongue is indeed the most appropriate medium for the initial years of a child's education.

But one can begin to envisage a scenario in which the continual expansion

Repetition: the most visible expression of school failure

Box 3.4

School failure comes in several guises: including, among others, multiple repetitions, and dropping out without any qualifications or recognised skills. In all such cases the common factor is that school failure is highly disturbing on the moral, human and social plane. Very often, as the Delors Report (1996) shows, it generates situations of exclusion, which mark young people for the rest of their lives.

Repetition as a form of failure and under-use of school capacities is a problem permeating the entire Mozambican education system. It is to be found in all types and levels of education; it affects all the country's provinces without exception; it takes on homogenous characteristics in the rural environment and in urban areas; and it has a gender dimension - that is, the phenomenon is more pronounced among girls than boys.

The statistics available on education show that repetition is the variable that has remained unchanged since the introduction of the SNE in 1983. With the implementation of the SNE, the educational authorities decided to scrap national examinations in the intermediate grades, keeping them only for the final grades of each cycle. With the end of the war in 1992, the drop-out rates which had been reaching averages of 20% in EP1, were reduced substantially. Currently the drop-out rate stands at 8%. School pass rates are increasing consistently, but slowly; as from 1995 important investments were made in teacher training and in the provision of educational resources. But the percentage of pupils repeating years in the system has not changed, and remains high. In EP1, the number of pupils repeating years between 1987 and 1999 was, on average, 25%.

Dropping out and repeating years are two forms of under-using capacities. In a more restrictive functional definition, it means that the pupils in a particular cycle or level of education do not finish their studies in the number of years laid down. The assessment of the internal effectiveness of the educational system, starts out generally from the assumption that all pupils entering 1st grade, for example, should complete the EP1 level in 5 years.

Under optimum conditions, a primary school pupil should spend a year in each grade, in order to conclude EP1 in five years. However, when a pupil repeats a year or abandons the school, the average number of years per pupil needed to complete EP1 surpasses the stipulated five. Under these conditions, the pupil who needs more than one year to finish the grade, is using space, teaching time, books and other resources that could be used by other pupils. For example, in 1999 there was a repetition rate of 24% in EP1 - in absolute terms, that was 495,000 pupils. By way of illustration, one should note that, to find room for these repeating pupils the system had to mobilise 4,950 additional classrooms (1 room for 100 pupils in two shifts), and the same number of teachers.

Repetition, which often leads to dropping out, has long term repercussions in illiteracy trends among adults. It is agreed that children who drop out of school before acquiring basic skills in reading, writing and elementary arithmetic may revert to illiteracy. From the financial point of view, regardless of the educational repercussions, repetition is inefficient because it increases the costs per pupil, without increasing the number of graduates. The resources spent on someone repeating a year could have been spent on educating more children or in improving the quality of education.

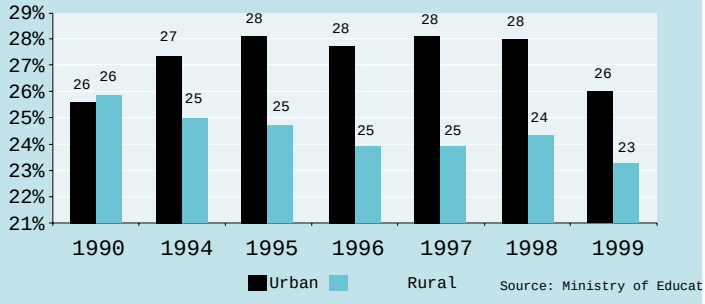
Comparison of repetition in rural and urban areas shows that the figures are high in both, as the following graph shows:

Apparently there is a higher percentage of repeaters in urban areas than in the countryside. But this does not show the whole picture - the urban figures merely indicate that more pupils who fail in urban areas stay on and repeat the year, than is the case in rural areas.

As in other developing countries, in Mozambique repetition is generally the prelude to dropping out. The measure applied to pupils who do not satisfy the objectives laid down for the level they are attending is repeating the grade, since the teachers believe that this way the pupils will have more time to assimilate the knowledge that eluded them the first time round. Thus repetition is conceived as a solution for pupils who are slow to learn. This practice is very normal, particularly in 1st grade, because the teachers are convinced that it is important for children to begin their education properly.

Some countries believe that repetition creates more problems than it solves. After studying several pieces of research on repetition, Lorrie Shepherd and Mary Lee Smith reached the following conclusion: "Contrary to popular belief, repeating a grade does not help pupils to obtain better academic results, and has a negative impact on their social integration and self-esteem". That is why some countries adopt a policy of automatic promotion to the following grade, as discussed in box 3.5.

Graph 3.14: Evolution of the percentage of pupils repeating years in EP1, by urban and rural areas



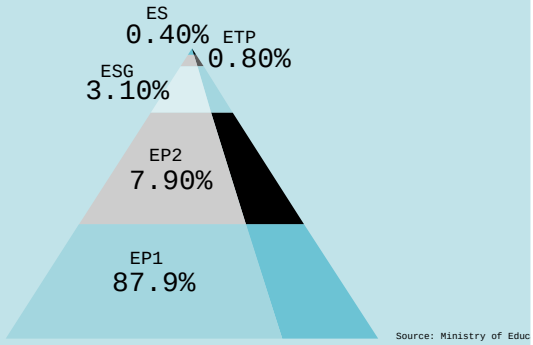
of the system will not depend only on supply: other social and pedagogic mechanisms will have to be set in motion to encourage demand in order to minimise the underuse of the existing units. Rather than continuing to sustain expansion by resorting to investments in the building of classrooms, the system will have to improve significantly its retention rate and reduce the number of repetitions, which are continuing to waste about 25% of the capacity of primary education.

From the organisational point of view, it can be said that the SNE is guilty of a structural distortion which is an assault against the dictates of the very law which advocates universal primary education.

Indeed, as Graph 3.15 shows, the system has a broad base in EP1, but is then abruptly narrowed in EP2, which is the second level of primary education. This is because of the organisational form of EP2, which functions by independent subjects, similar to secondary education. This makes it very expensive and difficult to expand throughout the vast national territory, because of the number of teachers needed for EP2 to function fully.

A further important constraint in the system is the irregular availability of school textbooks, which are indispensable tools in the teaching-learning process, and have a major influence on quality and efficiency. One of the concerns is the systematic delay in distributing books. The delays seem to arise from the inefficiency of the distribution system and from the fact that the books are printed outside the country. A possible solution to chronic delays would be to produce the books in Mozambique; not only would this make the distribution timetable easier, but it would stimulate growth of the national printing industry. Distribution is merely an internal problem, but printing the books inside Mozambique demands complex negotiations with the international partners who fund the printing of textbooks.

Graph 3.15: Pupils by level of education, 1999



Secondary education, technical and professional education

The most worrying problem in secondary education is its low quality and efficiency. From the point of view of coverage, in 1999 there were about 64,000 pupils in the 1st cycle of secondary education, and 8,000 in the 2nd cycle. Those are enrolment rates of 6% and 1% respectively. These coverage levels are manifestly low, both in relation to the distribution of the school population by the various levels of education, and in comparison with the total population of the country.

Furthermore, there is a general perception that the secondary education curriculum is very academic and encyclopedic. In part, this reflects a conception of secondary education as aimed mainly at providing students for universities, hence the limited stress on creating and strengthening skills and aptitudes so that those young people who do not obtain places at universities may be integrated into the labour market. To add

Automatic promotion, or assessment by cycles

Box 3.5

Assessment is one of the fundamental components of the teaching-learning process. It is a basic instrument for guiding the teachers in their work, showing them whether their teaching practices are the most appropriate ones. Assessment is also important for the pupils, since it helps them to identify the strong points and the weak points in their learning. Assessment is also the means for measuring whether educational programmes and activities are attaining their objectives, and it is through assessment that educational systems certify the competence acquired by pupils.

Frequently teachers, parents and society at large only understand assessment in this final dimension, that is, as certification or classification, while ignoring its function as guiding the teaching-learning process.

This chapter shows how high the levels of school failure are, particularly in basic education. Educational research work shows that many of the pupils who pass their grade or cycle do not in fact reach the educational objectives laid down for that grade or cycle. But it also happens that pupils with good school performance throughout the year do not pass their grade. These situations show a certain arbitrariness in the way the assessment system is operating. Thus the assessment system itself becomes one of the causes of school failure.

As a result of the diagnoses undertaken of the assessment system, the proposal has emerged of introducing the assessment system known as "automatic promotion", or "assessment by learning cycles".

What is intended with this form of assessment?

The basic education curriculum that is now being designed for Mozambique is structured into three cycles: the 1st cycle consists of 1st and 2nd grades, the 2nd cycle of 3rd, 4th and 5th grades, and the 3rd cycle of 6th and 7th grades. Each of these cycles is a learning unit or cycle, which has final objectives defined. These objectives indicate the level of performance expected of the pupils in terms of knowledge, abilities, skills and aptitudes.

In line with this concept of the curriculum, the assessment system known as "automatic promotion" or "assessment by learning cycles" will be introduced, In this system all pupils pass automatically into the intermediate grades of each cycle. This means that the question of whether a pupil passes or repeats a year is not asked in all grades, but only in the final grade of each cycle. It is then that the pupil is assessed and, according to his or her performance, it is decided whether the pupil advances to the next cycle. The objectives of the cycle are the guiding reference points for the teaching-learning process as well as of the continual assessment of the pupils during the grades of each respective cycle.

It is not therefore a question of administrative passes, as the expression "automatic promotion" might suggest. It is an assessment system which takes into account training objectives for a period of time longer than one academic year.

The solution to any problem is not found in more or less magical recipes. Improving the quality and effectiveness of education is an objective that can only be attained in a complex fashion. Thus the introduction of "automatic promotion" is not a panacea, or a magic wand that will improve the performance of the schools. On the contrary, it will require greater responsibility from the education system. The teacher must know each pupil, their performance, and their learning difficulties so that these may be overcome in the course of the cycle. This means that the first teacher must pass on to the teacher of the following grade the pertinent information on each of the pupils. This information is a necessary condition for guiding the teaching work in order to overcome the learning difficulties faced by various pupils the previous year.

Introducing this information system implies a major effort so that the schools may become true institutions with a considerable level of organisation and responsibility.

to these problems, the number of qualified teachers at this level is low. Only 25% of the teachers in the 1st cycle of secondary education are qualified to teach at this level, and this has obvious implications for quality.

The rapid expansion of primary education and the improvements that are beginning to show in its internal effectiveness are imposing additional needs which the current secondary education does not have the capacity to meet.

The problem of secondary education is made worse by the chronic failure of technical and professional education to adjust to the current characteristics and dynamics of the Mozambican economy. Conceived in the late 1970s, the technical education curriculum was designed to meet the needs of a centrally planned economy - more specifically, in the context of a Prospective Indicative Plan through which the Mozambican government

believed it could change profoundly the backwardness of the Mozambican economy within a time span of just ten years.

On this basis, elementary agricultural and arts and crafts schools were eliminated, and the structure of specialisms in the basic and mid-level courses became highly diversified. The challenges posed to technical education in the current conditions of the national market impose appropriate measures aimed at improving the efficiency of training and of the mechanisms for coordinating with social partners, particularly with employers.

Literacy and adult education

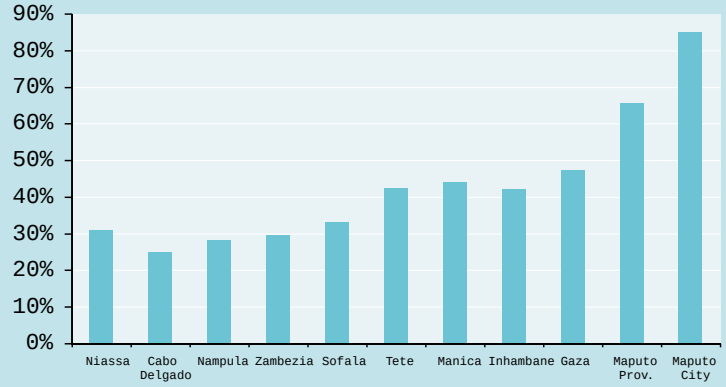
Just as in general education, so in literacy and adult education, the effects of the war were felt very sharply as from 1983. From that date, the number of people participating in literacy activities fell off dramatically, particularly in rural areas. But factors other than the war contributed to rapid decline and disappointment, including:

- Excessive formalisation of adult literacy activities;
- The use of the Portuguese language as the sole medium of instruction;
- Defective programmes;
- The lack of basic educational material;
- Defective training of literacy monitors and adult educators (MINED, 1990).

The approach adopted towards literacy activities, which consisted in organising a national campaign without taking into account the specific characteristics of the social groups at which it was aimed, or the particular characteristics of the various regions of the country, proved inadequate.

It is thus urgent to find a way out which can rekindle the same enthusiasm with which the public embraced literacy campaigns in the years immediately following independence.

Graph 3.16: Literate population by province, 1999



Source: Table 8, Statistical

This can only be achieved through programmes and contents that respond to the real needs and aspirations of the literacy students and allow them to view the time spent on learning as an opportunity benefit rather than as a cost.

In this effort, obviously not all the responsibility for providing this education can be shoved onto the state. Other institutions, such as the local authorities, will have to play a significant role.

The challenge of adult literacy work becomes more complex when we bear in mind that the incidence of illiteracy is not

Table 3.2: Private education: Pupils by level of education, 1999

Province	EP1	EP2	ESG1	ESG2	Total
Cabo Delgado	964	501	431	25	1.921
Gaza	1.161	79	263		1.503
Inhambane	798	464	292		1.554
Manica	1.960	530	191	45	2.726
Maputo Prov.	6.244	1.093	401		7.738
Nampula	545	147	363		1.055
Niassa	3.754	181	967	100	5.002
Sofala	5.042	1.395	1.676	119	8.232
Tete	2.376	265	329		2.970
Zambezia	2.082	528	415	45	3.070
Maputo City	9.155	3.458	5.068	1.534	19.215
Total	34.081	8.641	10.396	1.868	57.584

Source: MINED

uniform throughout the country - there are regions with a greater level of literacy than others. This is a consequence, on the one hand, of the unbalanced way in which colonial education was implanted in the country, but also of the differentiated impact of the war on school infrastructures.

Graph 3.16 shows precisely the flagrant asymmetries in terms of the percentage of the population that is literate. In the 11 administrative divisions of the country, the rate of illiteracy among the adult population ranges from 15% in Maputo city to 75% in the northern province of Cabo Delgado. The national average illiteracy rate is estimated at 60.5% of the adult population.

National languages, education and citizenship

In Mozambican society, there is currently greater awareness and sensitivity as regards cultural pluralism, which is mainly expressed in linguistic diversity, moulded also over time by geographical, historical, economic, political, social and religious diversity.

However, there is still no social consensus on how to manage the relationship between the various languages that exist in Mozambique. In practice, the country faces a dilemma of an unbalanced and competitive co-existence between the ex-colonial language and the indigenous African languages.

Portuguese is the language of public life, covering the administration, the education system and the mass media, while the bantu languages are generally restricted to the domains of family relations, traditional social life, religious rituals etc. Thus a socio-cultural context is shaped that is polarised between a language that expresses the logic and values of modernity, and the bantu languages that express the logic, cosmic vision and values of "traditional society".

Mazula (1995) attributes this socio-linguistic situation, where bantu languages are structurally subaltern, to the decision taken after African independences, to opt for the language of the coloniser, placed in the perspective of the "Euro-modernity" of nation building.

Until very recently, the binding function of the Portuguese language was justified by the fragility of a nation that was still being formed.

It is imperative to define a policy that establishes, among other things, the principle of equality of all national languages. But this should not be understood as denying, or relativising, the importance of Portuguese which, in many cases, is a point where the various cosmic visions and cultures that shape Mozambican society meet, communicate and enter into dialogue. For many people, Portuguese has become endogenous and expresses the construction of a Mozambican identity. It is also through this language that Mozambicans have access to the scientific and

technological knowledge accumulated by humanity. It is in Portuguese that Mozambique expresses itself and is heard in the concert of nations.

An authentic relationship of dialogue between the various languages/cultures implies overcoming the inequality in their social status. Establishing equality between languages presupposes that no language has a "privileged" status, either in daily life, or in the specific worlds of social reality (economic, political, scientific).

In this context, Mozambican society faces the challenge of designing and building relations of equality between its languages, including Portuguese, as essential components of its cultural heritage, It is a challenge that is not just linguistic, but also social and political.

Democracy is a value that should permeate all dimensions of social life, implying that nobody may be marginalised or excluded from building their own society because of the code they use to express themselves.

There is no freedom of expression/communication/participation when the value and substance of what is spoken mainly depends on the privilege and power of the language in which the citizens express themselves. The construction of a democratic society should rest on the dynamic of communication based on linguistic practices and policies that do not favour the dominance of one language over the others because it is regarded as "more effective", "more capable", "more adequate to reason and to science". It should be recognised, in practice that all languages contain the possibility of expressing the world. Furthermore, it must be recognised that there is not just one possible reading of the world. All possible readings are legitimate and have the right to be expressed.

Social policies and practices that do not take linguistic plurality into consideration tend to generate and strengthen differentiation and social exclusion, encouraging potential foci of social and political conflict. It should be recognised that the fact that, in Mozambique, Portuguese is the sole official language, and the teaching medium ends up by reproducing and fomenting inequality and social exclusion.

The negative effects of the current linguistic choice make themselves felt with particular force in schools. While recognising that there are multiple factors behind the "school failure" of many children, there is evidence that the linguistic factor has a considerable negative weight in the learning process. The levels of "school failure" in Mozambique are very high, affecting particularly children from the poorest strata who, coincidentally, do not have Portuguese as their mother tongue. National and international research shows that a poor

Private education

Government policy towards private bodies in education has had two expressions in historically different periods. Immediately after the proclamation of independence, one of the first and strongest political decisions taken by the government was the nationalisation of education. This was a measure aimed essentially at democratising education, creating the legal basis to ensure access for all citizens.

However, study of the educational situation in 1990 noted worrying levels of exclusion from school caused partly by the destruction of about half the primary school network by the war, and a

Box 3.6

level of adaptation of educational programmes to the cultural and linguistic characteristics of the pupils is one of the main causes of school failure.

In order to improve the quality of education, the government has decided to introduce national languages/mother tongues into education, and to promote bilingual education. In this learning strategy, children acquire the codes for writing and reading in their mother tongue, while at the same time becoming familiar with the Portuguese language, mainly in its oral form. They learn other contents and develop basic skills in their mother tongue, which serve them for later learning. The Portuguese language is gradually introduced as the medium of instruction in the various curriculum subjects.

Bilingual education rests on the assumption that mother tongue education is an excellent way of promoting capacities and skills that can later be transferred and used in academic performance in a second language. According to these authors, bilingual education programmes promote more equitable development through training pupils in multilingual practices in the community, and making them aware of the important socio-political and economic roles of other languages.

Bilingual education offers the pupil advantages, by proving a solid basis for more effective learning of other languages and other knowledge. Furthermore, bilingual education allows children to establish a relationship of dialogue between the logic, content and values of their own culture, and the logic, content and values expressed by the school. For adults, bilingual education successfully exploits experience and knowledge as a strategy for more efficient learning, apart from making learning less demanding. It can thus reduce the high drop-out levels in adult literacy classes.

The introduction of national languages in schools will make a large contribution to overcoming the clash between the logic of tradition and the logic of modernity, at the same time as opening a path for greater cultural insertion of the school in the community.

The use of mother tongues in the schools will refine fluency in those languages, and enrich and develop them. It will contribute to an equality in the social status of national languages, as well as for their public use.

The introduction of Mozambican languages into teaching is a great challenge for the National Education System. The pilot experiments undertaken so far in some primary schools in Gaza and Tete provinces are encouraging. So are the literacy classes for adults (mainly women) in Nyanja, Sena, Ndau, Shangaan and other languages. However, careful planning will be needed to ensure adequate training of teachers and the development of bilingual education materials. This innovation will demand great capacity for school organisation, since bilingual education programmes, if they are to be successful, cannot be imposed from the top downwards. The initiative and the demand for bilingual education should primarily be the choice or preference of families themselves.

This conception of the introduction of bilingual education - from the bottom upwards - should mean the involvement of the communities, families and teachers, and should take precautions against possible misunderstandings and conflicts , particularly in linguistically heterogenous areas. Hence from the linguistic point of view, the introduction of bilingual education is less complex and more pertinent in homogenous areas.

Furthermore, more research and studies into the linguistic reality of the country are needed, particularly of those languages which are less well-known to linguistic research and which still need adequate codification. The results of these studies are indispensable as ground work for developing a bilingual education curriculum.

This recent political decision is an important step forward, albeit insufficient to confer "citizenship status" on national languages, allowing them to be used in the various public institutions and services. The possibility that children and adults can learn to write in their own languages is a starting point for the development and use of the languages in the various spheres of social life. A path is opened to a more democratic linguistic practice, and to the necessary preservation and development of the country's most important cultural heritage.

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reduction, in real terms, of the ability to finance education out of public funds. This finding, together with the spirit of liberalisation that inspired the economic reforms, led the government to recognise that the state could not continue to be the sole provider of education. In this context, the government approved legal mechanisms seeking the intervention of non-governmental agents in education.

Behind this law lay a government expectation that private education would contribute to the expansion of the school network nationally. However, the levels of coverage suggest that the role of private education can be further strengthened and developed. Table 3.2 shows the distribution of the pupils who were attending the various levels of private education in 1999.

The data in table 3.2 show a clear concentration of private schools in Maputo city, and in Sofala, Maputo, Niassa and Zambezia provinces. The geographic distribution of private schools shows that they are located in urban centres, while they scarcely exist at all in the countryside.

An analysis of how these schools operate enables us to distinguish two categories: fee-paying private schools, normally sought after by the social classes who are able to pay the costs inherent to education in these institutions; and community schools run by religious bodies, philanthropic associations and other forms of community organisation.

Broadening access to the first category will always be limited by the size of the market. This private education is obviously aimed at the well-off social strata.

The second category contains an enormous potential for development, guided not so much by market criteria, but by the need to offer opportunities to citizens who find no places available in the public education network. That is why it is this type of school which, at this stage, has benefitted from government support (albeit still insignificant) in the form of wages for the teachers, and textbooks for the pupils.

Private schooling has also entered the sphere of higher education. Non-public higher education first appeared in 1996 with the appearance of the Catholic University and the Higher Polytechnic and University Institute (ISPU). Initially catering for only 262 students, private higher education has grown rapidly, and in 1999 the number of students reached 2,913. Part of this growth resulted from the opening of another higher education institution, the Higher Scientific and Technological Institute of Mozambique (ISCTEM).

Higher education

Higher education has undergone a noteworthy evolution in recent years. The University of Lourenço Marques was transformed into the Eduardo Mondlane University (UEM) in 1976. As from that date it was possible to introduce courses that had not previously existed, ensuring that the range of courses on offer gradually evolved and varied.

In the mid-1980s two new higher education institutions were set up: the Higher Pedagogic Institute (transformed into the Pedagogic University in 1995), and the Higher Institute of International Relations. By 1999 there were six recognised higher education institutions in Mozambique, with about 12,000 students, of whom 25% were attending, as already mentioned, private

The inadequacy of higher education: A proposed solution

Box 3.7

Stating the problem

There seems to be a consensus in Mozambique that the training provided in our higher education institutions is inadequate to the country's socio-economic development needs. Many of the recent graduates from our universities do not possess the abilities and skills needed to face the challenges of the practical reality of life in companies and other public institutions.

As is obvious, the fact that university graduates are not equipped to deal with the challenges of the country's social and economic reality is more blatant for some courses, and less evident in others - but, to varying degrees, the phenomenon is more or less general.

Although this is a complex and multifaceted problem, the causes of which must still be studied in depth, there can be no doubt that to a large extent it results from the weak pedagogical preparation of university teachers. This leads to the general use of antiquated, ineffective and obsolete methodologies - and on top of this, many of them are badly practiced. This problem worries government members, civil society and the leadership of the universities themselves, who have been seeking solutions, some of them of an immediate nature, others more structural in character.

So far there is a vague feeling of this inadequacy, expressed by the perception of company executives that "the new graduates are good in theory, but weak in practice". Many managers in companies and various parts of the state apparatus have presented concrete cases on the basis of which these value judgements have been made.

There has not been much evidence concerning in which areas and faculties the problem is at its most serious. But a recent study shows that the problem is particularly sharp in the area of justice and law, where apart from the problems inherent to inadequate training, there are also problems of corruption, and the legislation itself is inadequate. Many of the criticisms from civil society and from business people result from their direct observation in companies, but this covers a wide range of areas and faculties, from engineering and science, to economics and management.

One factor which certainly plays a role of the greatest importance is the lack of pedagogical training of university teachers. This has a multiplicity of consequences in several aspects of the educational process, which all contribute to the inadequate and feeble quality of the training provided, namely:

- In the design of the curriculum, which is still mainly based on a tradition which is in many aspects foreign to our country, and not on any scientific analysis of the training needs. This analysis is not undertaken, basically because most of the teachers do not know how to do it.
- In the incorrect development of the curriculum and of the programme of the disciplines, because the majority of the teachers have not mastered such elementary things as the establishment of educational objectives, defined as "the envisaged modification of the behaviour of the student during the training process, which is shown by what the graduate will be able to achieve and to prove, in measurable form, in the cognitive field (knowledge), in the behavioural field (attitudes) and in know-how (technical skills)."
- In the capacity (or rather incapacity) of ensuring a balance between the three essential spheres of learning: cognitive (knowledge), sensor-motor (technical skills or know-how), and emotional or behavioural (attitudes, or "knowing how to be"). Among other reasons, this is due to a complete lack of knowledge of the most appropriate educational techniques for facilitating learning in these various spheres.
- In the almost exclusive use of the classical method of teaching, sometimes in its most backward forms, without any capacity to modernise it, and sometime also with a very low level of didactic performance.
- In the capacity (or rather, incapacity) of using correct assessment techniques. The result is the adoption of instruments of assessment that are of very poor quality, are extremely unreliable, are of doubtful pertinence and objectivity, and in general are not able to discriminate properly. The consequences of all this are serious injustices in the whole process of assessing students. A large slice of the time of university leaders is taken up with solving conflicts that derive from this.
- In the teachers' refusal to be assessed, by various methods, including assessment by the students - added to which is their inability to construct adequate and correct instruments for self-assessment.

A proposed solution

Organisation of the course

- It is proposed that initiatives to train university teachers be multiplied, giving priority right from the start to teachers who are motivated to undertake pedagogic and methodological innovation, particularly the younger holders of university chairs, but not restricting the training only to these.
- The creation of these courses would not raise any technical problems nor would it require importing technology, since two volumes of the work "Metodologia de Aprendizagem por Solucao de Problemas" (Methodology of Learning by Solving Problems), written by the author of this contribution, already enshrine a course of this nature
- The best way of holding this course should be analysed, because various modalities could be envisaged:
- In a continual regime outside of working hours;
- In a scheme of five tasks a week, one week a month, for eight or nine months;
- In four compact intensive modules, for four weeks (35 hours a week);
- In a single intensive compact block of four weeks (35 hours a week).

The two institutions with the greatest vocation for this task are the Educational Science Faculty of the Pedagogic University, and the new Education Faculty of the UEM. However, there is nothing to prevent any other faculty from deciding to take on this mission.

Application of the methodology

To this end, several faculties of the various universities will have to be persuaded to collaborate. In these faculties, some disciplines must be identified that, because they are directly linked to the professional practice of the graduates, can be easily problematised. Those in charge of these chairs will have to be motivated to make themselves available to participate in this attempt at pedagogic innovation. These chairs will have their programmes restructured so that the new methodology may be applied to them.

- The practical application of the "Methodology of Learning by Solving Problems" to these chairs will only be done effectively in the academic year following the training of their respective teaching staff. The first year would be dedicated to establishing all the conditions for implementing the discipline in new moulds. This means not only restructuring the programme in new moulds, but also the production in due time of the respective didactic materials, namely: Key Problems, Working Guides and Facilitator's Guides, as well as assessment instruments.
- The production of the didactic material adapted to the methodology can be undertaken together with the training of the respective teachers, because it can form part of the Course Work during their training.

Encouraging initiatives that seek to improve the pedagogic and didactic techniques used

- The training of university teachers in the "Methodology of Learning by Solving Problems" will not be restricted solely to the holders of chairs in disciplines that can be problematised, and who have volunteered for the introduction of this methodology into their discipline. It would be extended to a larger number of teachers, including those who do not hold chairs, and to teachers in disciplines that cannot be problematised, in order to make them aware of how inconvenient the classical method of education is, and of the need to insist upon learning not only knowledge, but also technical skills and attitudes.
- Furthermore, they would also become able to define educational objectives, as well as a series of participatory pedagogical techniques based on group dynamics, which are useful for facilitating the learning of technical skills and attitudes, which they could introduce into their conventional programmes, thus modernising the classical method of education.
- The methodology would also involve promoting the principle of assessment of the students, of the programmes, of the methodologies, and of the teachers themselves, including their assessment by the students.

Expected results

If the activities proposed here were to be implemented correctly, if a reasonable number of teaching staff (at least 60 in the first year) were to be trained, and if a substantial number of faculties were to join in this innovative process, and if in each of these faculties it were possible to implement the new methodology in one or two disciplines, then the following results could be expected:

- A significant improvement in the pedagogical competence of the teachers, with a resulting improvement in their performance;
- A significant improvement in the performance of the graduates in practical life. This improvement would result, not only from better training in the area of knowledge, but above all from improved performance in practical activities, behaviour and attitudes;
- Reduction in the failure rates, without reducing the demands made of the students, and indeed eventually increasing the level of demand;
- Improving the quality of student assessment, which would be undertaken with greater scientific rigour, and greater objectivity;
- Creation of a capacity to identify mistakes in implementation, bottlenecks, and insufficiencies in teachers' performance, with the timely taking of corrective measures, avoiding problems degenerating into conflicts.

Implementing the activities proposed would need resources, but in relation to the results expected, the required investment would be very modest, resulting in a highly profitable cost/benefit ratio. The resources would mainly be in the technical assistance field.

Dr Helder Martins

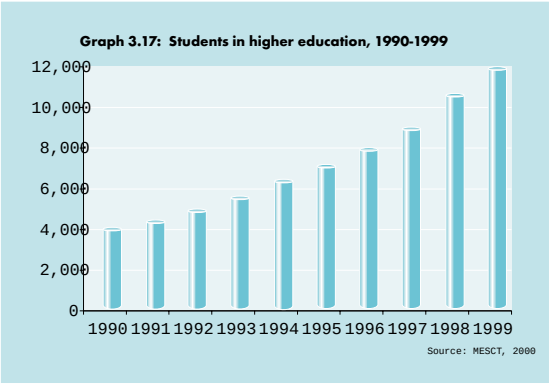
institutions (Table 3.3 and Graph 3.17).

It did not take long before the rapid expansion of secondary education put increased demands on the higher education institutions. The existence of second cycle secondary schools in all the provinces contributed to an increase in the numbers graduating from this level who demanded higher education. There seems to be a correlation between the increased demand for higher education and the salary system applied, at least in the state sector, which overvalues academic qualifications in determining wages. It is

Table 3.3: Number of students in higher education, 1990-1999

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
UEM	2.884	3.038	3.482	4.036	4.697	5.200	5.762	6.200	6.772	6.800
UP	813	1.032	1.118	1.214	1.377	1.489	1.462	1.520	1.564	1.987
ISRI	53	42	54	33		155	135	155	201	134
ISCTEM								201	500	644
ISPU							160	371	680	919
UCM							102	203	605	1.350

Source: MINED



thought that this circumstance sharpens the social demand for higher education.

Furthermore, a chorus of voices clamours for the establishment of higher education institutions in other parts of the country, on the assumption that this would help promote equitable access for students who do not come from Maputo, where the public universities are located, and would stimulate balanced development in the various regions.

Despite the results noted in the quantitative development of higher education in Mozambique, it is recognised that the main bottlenecks in the sub-sector concern its low level of efficiency, and the lack of relevance of its curricula, which are clearly out of line with the expectations of social and economic sectors.

The administration, management and planning of education

The colonial heritage left an extremely high illiteracy rate, an insufficient and distorted school network, a poorly trained body of teachers, and no experience or expertise in administering education (MINED, 1990). But this is not the only constraint, or at least it does not explain all the problems.

The current educational system also feels the effects of the model and style of governance adopted after independence, characterised by an excessively centralised administration.

An analysis of the environment that characterised the major reforms undertaken as from the early 1980s suggests that insufficient attention was paid to creating an internal capacity adequate to managing the developments resulting from the expansion of the system and the introduction of the SNE. There was great concern over teacher training, but there is no sign that areas vital for the sustainable operation of the system, such as the inspection and supervision of the institutions, educational planning, and financial and human resource management, among others, were duly taken care of.

The absence of this internal capacity, at central, provincial and district level poses real difficulties for the implementation across the country of the policies approved by the central bodies. Besides, one of the major challenges that the education sector has to face consists in restricting its action and intervention in the areas of political decision, norms, quality control, deferring responsibility for the implementation of the policies adopted to the local state bodies.

Financing education

The scarcity of resources is one of the constraints that surpasses the good will enshrined in the principle of universal basic education in the Universal Charter of Human Rights, and puts limits on how far one can put into operation the human development approach which regards lack of access to education as a human privation.

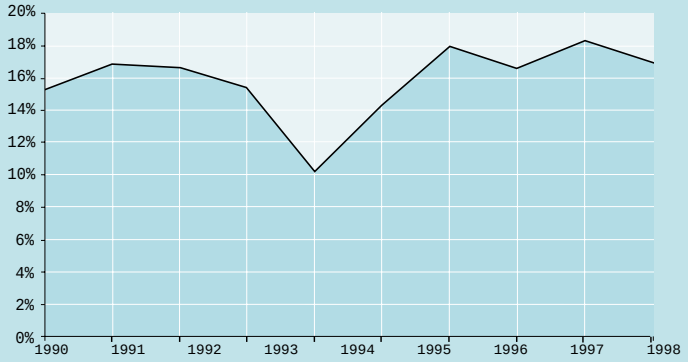
Expenditure in the education sector, at current prices, increased 16-fold in the 1990-1998 period, which corresponded to an average annual increase of 41.5%.

This growth was slightly higher than that for total state expenditure, which was an average of 40%. This level of growth in the resources allocated to the education sector shows the priority given by the government to education. Table 3.4 summarises the evolution of the funding of education over a ten-year period.

As can be seen from graph 3.18, internal recurrent expenditure on education, as a percentage of total recurrent state expenditure, in the 1990-1999 period, was always lower than 18%, with the sole exception of 1998 (18.2%), and was even lower than 16% in the 1993-1995 period. This figure is much lower than the 25% noted in many African countries.

The growth in the volume of resources made available for education hides a major weakness: more than half of all educational expenditure is financed from foreign funds. The proportion of external funding in the State Budget, mainly for capital expenditure, has ranged from a maximum of 63.3% in 1994 to a minimum of 44% in 1998, and it was envisaged that, in 1999, it would amount

Graph 3.18: Internal recurrent expenditure on education as a proportion of total state recurrent expenditure, 1990 - 1999



Source: Ministry of Education

Table 3.4: Public expenditure on education as % of GDP and of total state expenditure, 1990-1999

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999(*)
GDP (billions of meticais)	2.334	3.580	4.757	7.829	13.145	21.267	32.093	39.693	46.134	52.913
DTG - Total government expenditure	690	959	1.483	2.304	4.097	5.157	6.773	9.498	10.207	13.461
Recurrent	343	458	757	1.167	1.978	2.188	3.077	4.272	5.268	6.606
Capital (internal + external)	347	501	726	1.137	2.119	2.969	3.696	5.226	4.939	6.855
Total government expenditure as % of GDP	29,6%	26,8%	31,2%	29,4%	31,2%	24,2%	21,1%	23,9%	22,1%	25,4%
MINED	109	171	263	380	653	799	1.300	1.322	1.468	1.645
Total internal expenditure	50	75	125	171	203	268	486	648	875	1.005
- recurrent	45	65	104	145	142	249	441	583	798	907
- capital	5	10	21	26	61	19	45	65	77	98
Total external expenditure	59	96	138	209	450	531	814	674	593	640
Ministry of Higher Education	nd	nd	nd	nd	nd	nd	nd	237	400	476
Total internal expenditure	7	12	22	34	58	65	109	123	163	214
Total external expenditure	nd	nd	nd	nd	nd	nd	nd	114	237	262
Total internal expenditure in education	57	87	147	205	261	333	595	771	1.038	1.219
Total external expenditure in education	59	96	138	209	450	531	814	788	830	902
As % of total	50,9%	52,5%	48,4%	50,5%	63,3%	61,5%	57,8%	50,5%	44,4%	42,5%
DTE - Total educational expenditure (int + ext)	116	183	285	414	711	864	1.409	1.559	1.868	2.121
DTE as % of DTG	16,8%	19,1%	19,2%	18,0%	17,4%	16,8%	20,8%	16,4%	18,3%	15,8%
Recurrent internal expenditure on education as % of total recurrent expenditure	15,2%	16,8%	16,6%	15,3%	10,1%	14,4%	17,9%	16,5%	18,2%	17,0%
DTE as % of GDP	5,0%	5,1%	6,0%	5,3%	5,4%	4,1%	4,4%	3,9%	4,0%	4,0%
Internal expenditure on education as % of GDP	2,4%	2,4%	3,1%	2,6%	2,0%	1,6%	1,9%	1,9%	2,2%	2,3%
Exchange rate (MT/US$)	929	1.435	2.433	3.723	5.918	8.890	11.294	11.546	11.850	12.771

(*) Budgeted amount

Source: MINED

to 42.5%. This sharply demonstrates the strong dependence of the sector on foreign aid, despite the recent trend for a decline in this aid, as shown in graph 3.19.

The dependence on contributions from the international community to fund education reflects the fragility of the Mozambican economy. But it is pertinent to note that the internal funding of the education sector through the General State Budget is not yet in line with the priority given to education in political speeches.

In absolute terms, the amount of resources channeled to the sector has grown substantially, as stressed earlier. However, not only is total educational expenditure still low as a percentage of GDP, but it has actually declined: it fell from 6% in 1992 to around 4% in the last three years.

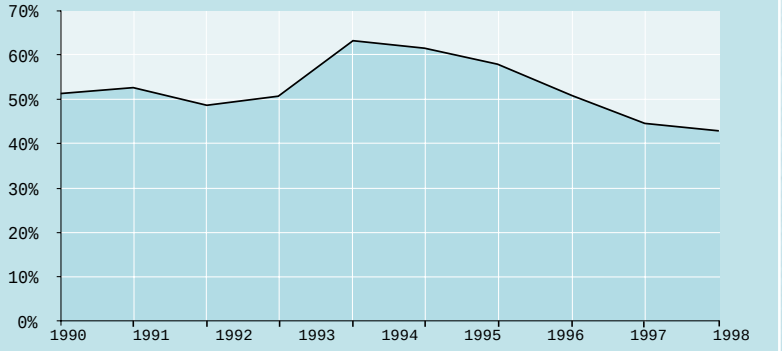
Internal (domestic) expenditure on education in proportion to the GDP is much lower, despite a slight recovery, advancing from just 1.6% of GDP in 1995 (the lowest figure for the period) to around 2.2% in 1998 and 1999. This sum is very low, particularly if we bear in mind that internal expenditure on education in the African countries benefitting from the HIPC (Heavily Indebted Poor Countries) debt relief initiative is, on average, about 4% of GDP, or twice as much as the current rate in Mozambique.

These indicators show that, fortunately, there is still space to increase the financing of education with domestic funds, even if the foreign funds continue to play an important role, as long as the priority given to education in political discourse is implemented at the level of resource allocation.

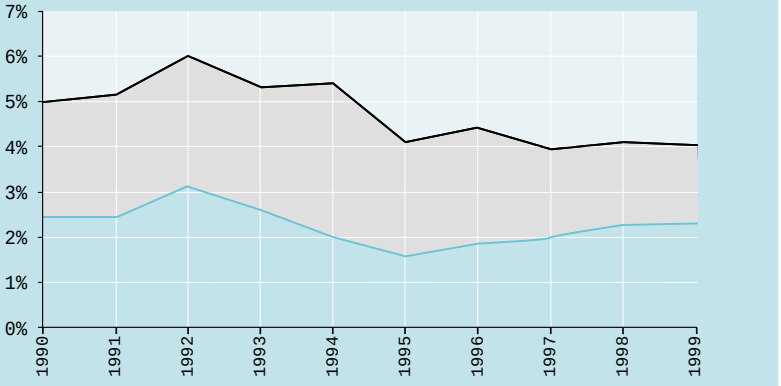
The HIPC initiative will not be sufficient, in itself, to increase the internal funding of educational expenditure to the level seen in African countries that are under conditions similar to Mozambique.

A World Bank study forecasts that in the coming years about US$ 120 million dollars will be released annually by HIPC. This figure will grow until it reaches about US$ 167 million in 2017. If one in four of the dollars released by the HIPC initiative is allocated to education, one can envisage this contributing to an increase of about 1.7% in internal educational expenditure expressed as a percentage of GDP. Thus it will still remain below 4%.

Graph 3.19 : Proportion of foreign funding in total educational expenditure



Graph 3.20: Educational expenditure as a proportion of GDP



Women and education in Mozambique: the magnitude of exclusion

Box 3.8

The indicators of women's limited access to education in Mozambique are alarming. Of the about 10.5 million Mozambicans who did not know how to read or write in 1999, about 6.7 million were women, contrasting with 3.8 million illiterate men. In other words for each man who does not know how to read or write, there are two illiterate women in Mozambique.

The incidence of illiteracy varies from region to region. But all the regions have one thing in common: there are always more illiterate women than men. In the southern region, 75.5% of the men are illiterate, against only 50.5% of the women. The gender gap in education widens as we move northward: in the central region, where 55.6% of the men are literate, only 21.3%, or one in five, of the women know how to read and write. The extreme case is the north of the country where just 13.8% of women are literate, as compared with 43.7% of the men.

The situation is worsened by the fact that the exclusion of women from the world of reading and writing is a phenomenon concentrated in the rural areas. Only 10 out of every 100 peasant women know how to read and write, compared with 53 out of every 100 women in the urban areas (UNDP, 1999).

There are many factors that explain gender discrepancy in education. Discrimination starts with the weak presence of girls in education at the lowest levels. For example, in EP1 and EP2, only 43% of the pupils are girls, despite the fact that 52% of the population is female.

The repeat and drop-out rates worsen still further the precarious situation of girls in education. It is estimated that on average 30% of the children in primary education repeat at least one grade. As a result, the average time taken to conclude EP1, which should last for five years, is 13.8 years for girls, compared with 12.7 years for boys. The picture is repeated in secondary education, but the levels of repetition are even higher at this level: 46.5% for boys and 53.5% among the girls.

Many factors explain this phenomenon. Some are inherent to the system itself, such as the quality of teaching, the availability of educational materials, the quality of teachers and of the education taught, the high teacher-pupil ratio etc, and they affect all the pupils equally.

But there are also socio-cultural obstacles that girls face in growing up, which not only contribute to their poor school performance, but also militate against their advancement, and in general discourage the education of girls.

Among the cultural barriers identified are:

- The low value granted to girls' education, which discourages families from investing in them. Families prefer to invest in boys' education, reasoning that the boys guarantee the continuation of the lineage, while the girls, once they are married, leave it;
- The burden of girls' domestic and seasonal labour. Girls complement school activities with domestic tasks, in addition to their role in agricultural production and in the informal sector;
- Tension between formal education and traditional education (premature marriages, bride-price, initiation rites and alternative instruction [Koranic studies]). Traditional education prepares boys and girls for adult life in groups separated by sex, while formal education prepares pupils in groups that contain both the sexes.
- A further contradiction lies in the medium and the objectives of the two methods of instruction. Traditional education uses Mozambican languages, while formal education is in Portuguese; furthermore traditional education shapes girls to be submissive and obedient, a fact which is sometimes seen as incompatible with the effort of investing in the education of girls;
- The small number of women teachers who can serve as a reference point and supervise girls is another negative factor. There are areas of Mozambique where women never represent publicly any roles other than that traditionally reserved for them in the domestic sphere;
- Poverty is another determinant factor not only because it forces parents to rely on girls' labour, but it also induces girls to opt for premature marriage or prostitution;
- Sexual harassment by male teachers and schoolmates is also a factor discouraging girls' attendance at school, and has an impact on their school performance;
- The distance between the school and the family home, lack of accommodation in boarding centres, and problems of availability of places worsen the problem still further.

The exclusion of women from education in Mozambique is extremely worrying, particularly if we take into account the social benefits of girls' education which are universally recognised. For example, when women are educated the rates of infant and maternal mortality fall dramatically.

In Mozambique there are empirical studies showing that the presence of a woman who has studied up to 7th garde increases her household's per capita consumption by 30%, while the probability that children under five will complete the cycle of vaccinations rises by 39%. Hence the fall in infant mortality as the level of education of their mothers rises.

Sources: Collieri, E (2000) Towards Gender Equality: Gender Profile of Mozambique (draft), Maputo;
Walker, M.B., Tembe, C. (2000) Addressing Gender Issues in Education in Mozambique, Maputo

Future prospects: The challenges of a relevant and inclusive education

The prospects for changing the diagnostic picture of education should take into account the environment and the context in which processes of change are currently occurring.

A certain number of factors are working in favour of transformations to improve the performance of the Mozambican education system. These factors can and should be seen as opportunities for change. They are:

- Internally, stability in consolidation, as a result of the environment following the end of the war, makes it possible for the country to think of a long term development vision to be structured on the basis of consensus, representing a broad national undertaking;
- At macro-economic level, the most recent trends towards a positive recovery of the Mozambican economy place education as a sector with comparative advantages that can be exploited in favour of human development;
- Internationally, the World Conference on "Education for All", held in Thailand in 1990, renewed the commitment of the international community to support basic education. There is a new paradigm of international cooperation, in which aid centred on projects that were frequently isolated and uncoordinated is being gradually replaced by support for programmes, in the "Sector Wide Integrated Approach" (SWAP). This approach opens the possibility that other areas, and not just basic education, may be the object of substantial support, as long as they present coherent policies and strategies;
- The HIPC initiative, and the admission of Mozambique into this scheme, allows the allocation of additional financial resources to educational programmes.

Furthermore, the strategic plan for the education sector expresses the priority transformations to be undertaken in the education system, oriented incisively towards the expansion of education and improving its quality.

The contribution of education in poverty reduction implies emphasis on a substantial improvement in the efficiency of education, particularly primary education, so that it can be expanded and universalised in reasonable and sustainable conditions.

The universalisation of basic education presupposes the development of forms of supplementary education such as adult literacy, with functional curricula and relevant educational contents that contribute towards the transformation and modernisation of productive processes.

These interventions seek to attain the goal of universalising good quality basic education that is relevant to the needs of the pupils themselves and of their communities, which is a fundamental requirement for the poverty reduction strategy.

In the framework of this strategy, the place and the importance of secondary education should be rethought. Indeed, the developments projected for basic education cannot be implemented without the intervention of secondary education. Enough professors, in quality and quantity, for primary education depends on strengthening the capacity of secondary education. It is also the task of secondary education to prepare young people for active life, and to continue their training in higher education.

As for technical education, it is from arts and crafts schools and agricultural schools that one expects a valuable contribution to the revival of the productive fabric of

the rural areas. These schools should offer training based on flexible and open curricula, that provide opportunities for educational advancement for young people and adults in a continuous manner.

Teacher training

A strategy centred on expansion, which does not neglect maintaining and improving the quality of schooling, will pose an important challenge to the teacher training sector of education. A rapidly expanding system will require heavy investment in initial teacher training. At the level of using the teaching staff, the system will have to make efforts to achieve more acceptable levels of efficiency - this can be done by overcoming the problem of the inappropriate use of teachers. Of the 3,000 primary teachers that, on average, the system recruits every year, about half are used to teach classes of students repeating years.

The teachers are a key element in the educational system. There are still many challenges regarding the selection, training and social status of teachers. The fact that a teaching career is not attractive largely explains why it is pupils with learning difficulties or difficulties in acquiring other jobs who attend the teacher training colleges. In other cases, teaching is chosen while awaiting for other, more attractive employment opportunities.

Obvisouly one cannot talk about giving dignity to the teaching profession without mentioning the need to improve the conditions of service of teachers. The apparent lack of interest on the teaching profession stems from the poor salaries paid to teachers, particularly to those working in the public sector. Table 3.5 depicts this reality.

It is imperative that the debate on education should be more participatory and democratic, as Machili stresses in Special Contribution No. 3. The widest possible consensus should result from this debate, as regards the objectives and contents of education, as well as in relation to the choices and priorities concerning the allocation of human and material resources to the education sector.

The current moment is one for valuing the complementary relationships created between the different educational spaces and actors where all the links in the chain together form an educational society. Only thus will education represent a true national undertaking which goes beyond government mandates, ensuring the implementation and expansion of the idea of lifelong education of citizens, and the dynamic autonomy of individuals in a society undergoing rapid change.

Table 3.5: Wage structure of career teachers 1999

	Rank	Minimum	Maximum
Teacher with complete EP2	N5	751.680	1.202.690
Teacher with basic level	N4	1.119.170	1.790.670
Teacher with mid-level	N3*	1.520.060	2.629.710
Teacher with bachelor degree	N2*	2.939.900	5.086.030
Teacher with honours degree	N1*	3.733.680	5.698.010
*Not including subsidies			

Source: MINED

The 13 gaps in teacher training

The project to build the Mozambican nation conceived of education as the priority instrument of liberation, as illustrated in the definition of education as "the base for the people to take power". The evidence that citizens understood this concept is shown by the explosive increase in school enrolment between 1975 and 1979 and by the acceptance of the new educational challenge in which mass access and quality were always viewed as compatible.

Paradoxically, given the clarity of the objectives laid down, it was already clear in the first decade of independence that the quality of teacher training and the performance of teachers were the weak links in the project. Since 1977, the annual coordinating meetings/councils indicated some of the causes of this weakness, but only in 1993 was the first attempt to introduce significant reforms made.

Several factors contributed to this situation.

The first is that the political vision of education was out of phase with the stance and the attitudes of the technicians and bureaucrats who introduced planning as a necessary instrument, but were not able to create and make operational instruments that kept up community participation in the educational process. Appeals and measures against exclusion were neglected until the institution of economic reforms which, together with the political transformations, once again brought this question into debate.

The second aspect is the absence of a defined, systematic profile of teachers for all levels and specialisms, which is an essential condition for designing training programmes that treat teaching as a profession which is cultivated and improved with practice. What there have been are guidelines on professional conduct based on the social awareness emanating from the "liberation ethic", from the ideals and political discourse of the Revolution, instead of an ethical code for teachers drawn up on the basis of a professional profile and of the national educational experience.

The third gap is the lack of a national teacher training policy that springs from the experiences accumulated in the various training models adopted to respond to social demand. This policy should emanate from the teacher training institutions and would offer precise guidance to all training institutions, while at the same time allowing the state to assess their performance.

The fourth aspect concerns the absence of a strategy and stable model for teacher training that would serve as a reference point for all public and private institutions, regardless of whether teacher training is their vocation. The harmful result of this gap is that we have adopted 23 training models for initial training, in-service training, and probation. If, on the one hand, the models are justified by the urgency of equipping schools with teachers, on the other there is no justification that for 25 years no institution has queried the absence of strategies and models.

The fifth question is the delay in specific study plans for teacher training to confer academic degrees, and justify specific professional categories for teachers. These plans would avoid the resort to equivalence with general education degrees, by introducing brand new professional categories. The current plans are not based on the study plans of the grades and levels of education for which the teachers are trained. The slowness with which the reforms of the study plans (curriculum reform) under way are conceived, drawn up and implemented, and the methodologies adopted, do not guarantee satisfactory and far-reaching results. There remains a failure to understand the importance of this relation in teacher training.

The sixth aspect is the fragility of curriculum development, which characterises the central and peripheral decision-making and implementation bodies in the national education institutions - which is fatal to the National Education System, and particularly to teacher training - for lack of specialists. The collateral effect of this constraint is that teachers have become repeaters, rather than producers-administrators, of knowledge. It is urgent that the public higher education institutions, and particularly the Pedagogic University (UP), place on their list of immediate priorities the training od specialists in curriculum development - otherwise future reforms will be exercises doomed to failure, and will endanger at root all projects for training human resources. Furthermore, it is urgent that the reforms to be carried out should prioritise consulting with teachers and their participation.

The seventh gap is the lack of contact between the curriculum and the cultural reality of most citizens, due to the phenomenon of standardisation, the apparent prop and guarantee for national unity. Although respect for cultural diversity is advocated, it has been diluted in the study plans, which are scarcely any different from the curricula of the colonial era. Teacher training has occurred in this epistemological deficit, which has made the teacher a "modernised repeater", but incapable of freeing the cultural identity of the pupil, rooted in traditions. Two qualities are expected from the current curriculum planners: a profound and sincere respect for cultural diversity, and the capacity and potential to turn universal knowledge into useful contents, that are relevant to Mozambican pupils and can be assimilated by them.

The eighth question is the lack of specialists in assessing knowledge, abilities and skills, and the effectiveness and efficiency of the system, who would provide objective indications of the constraints, and strategies and actions to deal with them. In the entire system there is just one cadre taking a doctorate in assessment. The assessments made were directed more at political rather than social impact. These two impacts imply the adoption of specific methodologies. The political impact prioritises the whole and its relation with the parts. It is an assessment for overall purposes, which are useful for the mind of the ruler, but misleading for the citizen. The social impact questions the effects based on the sum total of the measurable effects on the transformation and participation of citizens, and is always critical and demanding. The sum total indicates dissatisfaction, and is therefore an important warning sign for assessing the philosophy and practice of teacher training.

Gap number nine is the lack of an institutional framework to

make teacher training a professional specialism by levels, grades and specialisms. The effect of this would be the existence of an attractive academic career, to be chosen by candidates with a vocation, and not a refuge for the incompetent, embodying the well-know maxim "those who can, do; those who can't, teach". Teacher training as a professional specialism would engender an endogenous and specific academic culture, that would give dignity to teachers as a group, and allow them to win their space within Mozambican society. What is taking place in the current scenario is the multiplication of initiatives that are uncoordinated but which, ironically, are approved from on high.

The tenth gap is the limited number of specialists in teaching methods and techniques (methodologists) who would have the task of assessing and validating the quality of the initial and in-service training of teachers. They would shine a light onto the pertinence of programmatic contents, and would ensure that changes emerge that take into account the context of our vast and rich cultural mosaic. The lack of methodologists has weakened the probationary periods and the entire academic culture that derives from them, particularly the institutional relationship between the schools, the Ministry of Education and the training institutions and educational research based on the teaching and learning practices in the rural and urban ecosystems.

Number eleven is the weakness of training in educational administration and management, integrated into teacher training and as a specialism. The experience acquired from the days of the Mozambique Institute to the creation and operations of the Political and Administrative Organisation of Schools (OPAE), and the training of school directors, were significant steps indicating promising directions for the organisation, administration and management of educational establishments. However, centralising practice marginalised community participation and transformed the school director into an isolated bureaucrat. Currently the culture of school management with community participation is unsatisfactory. The current course in the Pedagogic University is attempting to overcome the delay and the causes of centralisation. Two aspects are emerging: one is the recognition of the administration and management of schools as a science with specificities to be taken into account; the other is that, in the current stage of development, it will only be effective and efficient if there is participation by society.

The twelfth gap is the regional integration of teacher training. This has been advocated since the national liberation struggle, and today it is a vital question. Our nascent academy has a Portuguese heritage but the regional reality is characterised by the tradition of the Commonwealth. Our training of human resources has resisted this reality, but the change begun with the agreement on harmonising curricula within SADC is now a reality.

The thirteenth aspect is the creation of conditions for a new trade unionism among teachers as a social class. This implies mastering the essential legal provisions on the rights and duties of teachers, such as the Constitution of the Republic, the Labour Law, the General Statute of State Functionaries, and the Statute of Teachers. These provisions should be integrated into the teacher training study plans, and would be an important for forming a social class awareness above political contingencies.

The success of policies and strategic plans for the education sector depend on teacher training. Thus the reform of the teacher training system requires a clear and unequivocal decision on the role of the public higher education institutions, because throughout the world this training is undertaken at this level, regardless of the institution to which they are organically linked. Training of teachers at all levels should, without any doubt, be the responsibility of the higher education institutions in Mozambique.

I note with satisfaction and disquiet that in the capital's private schools, primary teachers mostly hold university degrees. I do not see why this pioneering movement cannot be taken on board by the higher education institutions to benefit the periphery. An effort of this nature will doubtless lead to the emergence of a new Mozambican elite, and it will increase the possibility of revealing talents on the periphery, who are currently excluded because of the quality of education given to them by teachers trained to deal with emergencies.

Finally, so that the training of teachers to sustain the education system may be successful, it is imperative to:

- capitalise on the national experience in the design and practice of teacher training, which implies beginning applied research into the successes and failures of teacher training, collecting and processing all the documents on this area since the national liberation struggle, as well as the comparative study of our achievements with what was done in Mozambique during the colonial period, and the experience of other countries;
- draw up and approve a directive on national teacher training policy, on which all those interested in teacher training will base themselves;
- draft proposals to change the current system of teacher training accreditation in order to validate academic certificates, diplomas and degrees that impact on the wages system;
- design and implement a teacher training curriculum reform based on the study plans of the various levels and types of education, a vital activity that implies the effective participation of civil society, national political forces and consultation with specialists in the region and internationally;
- harmonise our teacher training with the practices in other SADC countries, which requires political will from the Mozambican institutions concerned, and presupposes knowledge of the study plans of other SADC members;
- design teacher training to prepare citizens for life or for the combat against absolute poverty which will imply drawing up an innovative study plan in which the technical content, the pedagogic disciplines (methods and techniques of teaching, the production of educational material, and the lick with practice) are a constant;
- change the current admission criteria to ensure a larger number of entries into teacher training institutions, which will to draw into the teaching corps finalists with a vocation, since only thus will we have a class of teachers with their own profile, dignity and identity.

Dr. Carlos Machili
Vice-Chancellor of the Pedagogic University

The true scale of the threat

Education plays a fundamental role in broadening people's choices. Educated people are more likely to invest their knowledge effectively and efficiently in creating conditions for leading a long and healthy life, free from want. They are better placed to use their rights and to carry out fully and consciously their duties as members of a community.

The return of peace and the economic recovery in Mozambique, together with improvements in access to education, as a result of investments in rebuilding the school network, allow Mozambicans once more to look upon the future with some optimism, particularly as regards broadened opportunities for access to education. However, the rebirth of hope among Mozambicans unfortunately coincides with a new challenge, with the ingredients of a new curse: the HIV/AIDS epidemic, which threatens to overturn all the efforts and resources spent over the last eight years of peace in the education sector.

Why talk about HIV/AIDS again?

This chapter aims to resume the analysis begun in Chapter 5 of the 1999 National Human Development Report for Mozambique on the social and economic impact of HIV/AIDS.

For some assiduous users of the Mozambican NHDR, insisting once more on the question of HIV/AIDS may certainly seem repetitive and tiresome, since the matter was dealt with in detail in the 1999 edition. Some may even ask themselves whether the Report is dealing with HIV/AIDS merely because it is fashionable.

But the understanding of the authors of this report is that HIV/AIDS is not a question of fashion. Years ago it stopped being just a health problem and became a development problem. The epidemic touches on all spheres, be they in the economic, political, social or even cultural domains. Thus it would be difficult to declare as exhausted the analysis of the epidemic in all its dimensions and implications for Mozambique. What may vary is how the problem is approached.

The main innovation of this Report is that it is the first analysis of the impact of the epidemic on the education sector. Right from the start, it should be noted that this Chapter does not pretend to present finished recipes on how the education sector can deal with HIV/AIDS to minimise its impact, but merely to contribute with an initial analysis of the possible impact of the epidemic on the sector. The Chapter draws attention to several aspects regarded as pertinent and which, when taken into consideration, might indeed help to minimise the effects of the epidemic. It resorts, wherever possible, to examples from countries which have faced the effects of HIV/AIDS earlier than Mozambique, who possess substantial evidence on the devastating effects of the pandemic on human development.

The characteristics of the pandemic

The fragility of the available data to some extent limits the scope of any assessment of complex phenomena such as the impact of the HIV/AIDS pandemic.

But analysing the impact of HIV/AIDS in Mozambique requires a brief review of the situation of the epidemic in the

country, in order to situate better the context in which this analysis unfolds. The challenges presented by the tragedy of HIV/AIDS are not confined merely to Mozambique; long before frightening statistics began to make headlines in the national press, other countries in the region, under conditions of peace, were already feeling the damaging effects of the so-called "plague of the 20th century".

Since HIV/AIDS is a global problem, and considering the scarcity of domestic data, comparison with other countries provides a basis for a better understanding of the nature of the emergency, and to transmit experiences in managing the impacts of the epidemic.

Table 4.1: Comparative data on HIV/AIDS prevalence and impact

Country	Number of people with HIV/AIDS 1999			Deaths	Orphans
	Rate of prevalence among adults (%)	Number of people infected (15-49 years)	Number of children infected (0-14 years)	Deaths caused by AIDS	Number of AIDS orphans
Botswana	35.80	280,000	10,000	24,000	66,000
Burundi	11.32	340,000	19,000	39,000	230,000
Ethiopia	10.63	2,900,000	150,000	280,000	1,200,000
Kenya	13.95	2,000,000	78,000	180,000	730,000
Lesotho	23.57	240,000	8,200	16,000	35,000
Malawi	15.96	760,000	40,000	70,000	390,000
Mozambique*	15.4	1,173,878	93,969	83,648	257,981
Namibia	19.54	150,000	6,600	18,000	67,000
Rwanda	11.21	370,000	22,000	40,000	270,000
South Africa	19.94	4,100,000	95,000	250,000	420,000
Swaziland	25.25	120,000	3,800	7,100	12,000
Tanzania	8.09	1,200,000	59,000	140,000	1,100,000
Uganda	8.30	770,000	53,000	110,000	1,700,000
Zambia	19.95	830,000	40,000	99,000	650,000
Zimbabwe	25.03	1,400,000	56,000	160,000	900,000
Total over 15 years old	13.95	16,560,000	692,600	1,531,100	8,080,000
Sub-Saharan Africa	8.57	23,400,000	1,000,000	2,200,000	12,100,000
Global total	1.07	33,000,000	1,300,000	2.800.000	13,200,000

Source: MJ Kelly, UNAIDS (2000). HIV/AIDS and Education, African Development Forum
* MISAU-MPF-INE-CEP/UEM, 2000. Impacto Demografico do HIV em Mocambique, Maputo.

In Mozambique there is a tendency to view the HIV/AIDS epidemic as less serious than that facing the neighbouring countries. Unfortunately this is not the case. Despite the fragility of the data, arising from the methods and the small number of sentinel sites, the available estimates indicate that the levels of infection in Mozambique are, at best, only a few years behind the most severely affected countries in the region.

By the end of 2000, about 40 million people in sub-Saharan Africa were carriers of HIV. A substantial part of this population of HIV-positive people were living in countries located near Mozambique, such as Botswana, Swaziland, Namibia and Zimbabwe, which have prevalence rates among the adult population of 20% or more - the highest rates in the world.

Three of these countries have extensive borders with Mozambique, and it would be pretentious to imagine that the country can maintain its position as a relative oasis for a long time. At worst, 2000 seroprevalence data could point to a maturing epidemic on a par with neighbouring countries. The following table compares the HIV/AIDS situation with that of other countries in southern and eastern Africa:

As table 4.1 shows, the prevalence rate among adults in Mozambique is somewhat lower than the regional average, but much higher than the average for sub-Saharan Africa, and about 14 times higher than the world seroprevalence average.

In the 14 years since the first case was diagnosed in 1986, cases of HIV/AIDS in Mozambique have risen at a gallop. It is

estimated that 1.5 million people in Mozambique are HIV-positive, with an incidence in 1999 of about 15.4% for the adult population (those aged between 15 and 49). According to some estimates, every day there are 700 new infections. The number of people who have already died from AIDS-related illnesses is estimated at over 100,000, and projections indicate that the cumulative number of deaths will rise rapidly, reaching 1.6 million in 2010.

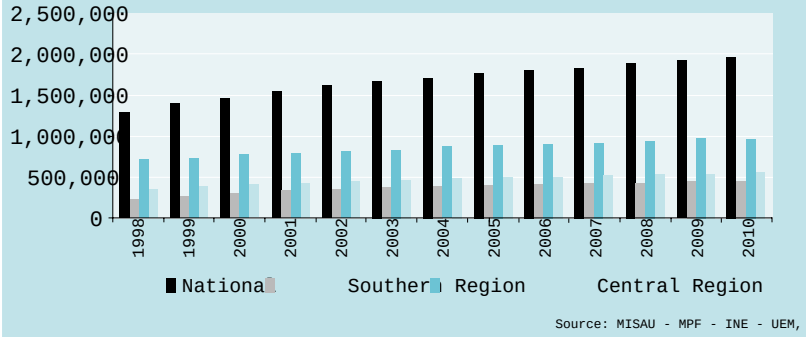
Prevalence among women is, on average, 1.6% higher than among men, meaning that women are 10.4% more likely to be HIV-positive than men. The age gap among women is particularly worrying. For the year 2000, for example, 35.4% of all new HIV infections among women will occur in women under the age of 30, compared to only 13.2% for men. The inference is obvious: women are being infected at a younger age, and are therefore dying at a younger age.

There are major regional differences in HIV prevalence, resulting from the differentiated evolution between the regions, as Graph 4.1 shows. Prevalence is highest in the central provinces of Zambezia, Sofala, Manica and Tete, with an estimated prevalence rate of 20.7% in 2000, compared with 13% in the north (Cabo Delgado, Niassa, Nampula) and 11% in the South (Maputo, Gaza, Inhambane).

This suggests that, in a first phase, the epidemic will have a differentiated impact on the various regions, even after it has stabilised. In the central region it is forecast that prevalence will level off at 21.4%, compared to 14.3% in the south and 14.4% in the north, as shown in table 4.2.

The reasons for assuming that the epidemic will begin levelling off in 2004 are not yet clear. This is particularly relevant if we take into account the limitations of the statistics and of the models that are described in Box 4.1. Furthermore, given the experience of neighbouring countries, this assumption that Mozambique will achieve early stabilisation may be overly optimistic.

Graph 4.1: People living with HIV/AIDS



Source: MISAU - MPF - INE - UEM,

Table 4.2: HIV/AIDS prevalence between 15-49 years

Year	National (%)	Region		
		South (%)	Centre (%)	North (%)
1999	15.4	11.0	20.3	13.0
2000	16.0	12.0	20.7	13.6
2001	16.4	12.8	20.9	13.9
2002	16.7	13.3	21.1	14.1
2003	16.8	13.7	21.2	14.2
2004	17.0	13.9	21.3	14.3
2005	17.0	14.1	21.3	14.3
2006	17.1	14.2	21.4	14.4
2007	17.1	14.2	21.4	14.4
2008	17.1	14.3	21.4	14.4
2009	17.1	14.3	21.4	14.4
2010	17.1	14.3	21.4	14.4

Source: "HIV/SIDA em Mocambique" INE, MISAU, MPF, CEP (UEM)

Limitations of the possible model

Box 4.1

One of the limitations of the Demographic Impact of HIV/AIDS in Mozambique concerns the fact that it was drawn up on the basis of seroprevalence data obtained from just five urban sites in the centre and south of the country in 1998. The study of the impact of HIV/AIDS on the education sector was also based on these projections.

The data presented here are based on the Spectrum projection models. This model, developed jointly by the INE and the Health Ministry to assess the demographic impact of HIV/AIDS in Mozambique, drew up projections of the population up to 2010 based on the Rural and Urban Projection programme (RUP). The spectrum system of policy models was then applied to project the impact of HIV/AIDS. Two sub-routines within Spectrum were used - DemProj and AIM (AIDS Impact Model). DemProj is the demographic model within Spectrum and is used to draw up population projections. AIM is the model used to assess the impact of the HIV/AIDS epidemic. AIM uses various assumptions about the population, fertility, mortality etc.

One cannot stress too much that models are, by definition, representations of aspects of reality, and are as solid as the theories on which they are based and the reliability of the data used. Consequently, the projections resulting from these models are limited by the quality of the available data, something which is a particular problem in the situation of Mozambique.

In Mozambique, there have been problems of information associated with the data of the 1997 census, and the data from the observation at the sentinel sites. The model took as its population base year a synthetic recreation of the 1981 population, based on the results and assumptions of the 1997 Census on levels of fertility and mortality prior to 1997.

The observation data (used to estimate prevalence rates among adults) were only available for five urban centres. The technicians started from the assumption that the epidemic began to spread earlier in the centre of the country than in the south. Furthermore, the assumption in the model was that seroprevalence in the centre was double that in the south, and that by 2005 it would be 50% higher. Since there was no observation in the three northern provinces, it was necessary to establish a basis for estimating HIV prevalence among the adult population of that part of Mozambique. The model assumes that in 1998 the prevalence was 25% higher than in the south, and that the prevalence rates in southern and northern Mozambique will be the same in 2005. Data on the epidemic will certainly benefit from expanding the number of sentinel sites from 4 to 22, distributed as shown in Map 4.1.

Map 4.1: Location of sentinel sites, 2000

Source: INE - MISAU - UEM

Adjustments to the model used in the projections, and access to new data, may result in modifications to these trends and assumptions, thanks in part to more representative ante-natal samples from 22 sentinel sites rather than four.

The motives for alarm

Although the virus prevalence rate in Mozambique is, in relative terms, at what may still be considered moderate levels for sub-Saharan Africa, the specific

circumstances of the country ensure that the HIV/AIDS epidemic should be seen as a tragedy with damaging consequences for development.

As mentioned earlier, about 60.5% of the Mozambican population are illiterate. The country has just 13,156 economically active individuals with higher education courses, of whom only 17% are women. These data reflect the level of vulnerability to the devastating effects of the epidemic in a country with limited resources.[6]

The epidemic strikes two blows at the fragile base of education cadres - first through the disappearance of trained and experienced people, and second though the waste of resources spent on their training. This concerns, and with good reason, society at the highest level, because the victims of AIDS include specialists trained with great sacrifice over the 25 years of independence.[7]

In attacking those aged between 15 and 49, the epidemic seriously compromises development efforts, because it concentrates on a significant layer of present and future producers, in a country where this stratum is that of economically active individuals and is estimated at only 37% of the population. In other words, one in six Mozambicans regarded as fit for work is infected by the HIV virus. The epidemic will force the healthy to bear, directly or indirectly, greater responsibilities and costs.

An unsustainable burden

One of the specificities of the HIV/AIDS epidemic is that it not only robs the country of many of its most productive individuals, but it also imposes many burdens on society. One of these heavy burdens is the sharp increase in the number of orphans. In the year 2000, there were about 500,000 orphans in Mozambique; in two-thirds of these cases their parents had died of AIDS. This means that in a scenario without AIDS only 162,000 children would be orphans.

Table 4. 3: Number of orphans by region, 2000-2010

Year	South		Centre		North		National	
	AIDS	Other Causes	AIDS	Other Causes	AIDS	Other Causes	AIDS	Other Causes
2000	33,034	37,022	229,794	66,855	78,603	58,532	341,431	162,408
2001	47,197	36,934	282,180	71,824	104,298	60,121	433,675	168,878
2002	63,707	36,956	333,417	76,732	131,339	68,048	528,463	181,736
2003	82,153	37,353	382,665	83,314	158,781	75,124	623,599	195,791
2004	101,916	37,935	429,153	89,628	185,774	81,503	716,843	209,066
2005	122,062	38,422	470,402	99,941	210,827	86,640	803,291	225,003
2006	141,944	38,991	506,947	109,267	233,683	91,281	882,574	239,539
2007	161,086	39,445	539,447	116,784	254,421	95,042	954,954	251,271
2008	179,146	41,564	568,003	132,543	272,963	105,292	1,020,112	279,400
2009	196,006	41,988	593,870	139,552	289,819	109,057	1,079,695	290,598
2010	211,580	41,479	617,403	141,250	305,186	109,368	1,134,169	292,097

Source: INE/ Ministry of Health, 2000

Projections from the National Statistics Institute and from the Health Ministry (2000) show that the worst is still to come. By the year 2010 there will be about 1.4 million orphans, and in 80% of cases their parents will have died of AIDS. In other words, in addition to a figure of some 280,000 orphans in a scenario without HIV/AIDS, the country will have to establish the conditions to deal with the special needs of a further 1.1 million AIDS orphans - that is four times more.

The country will face difficulties in mobilising the resources needed to face this new emergency, particularly when one bears in mind that 69% of the population, or about 11.7 million Mozambicans, survive on a consumption of less than 5,473 meticais (40 US cents in 1997) a day, and are therefore classed as "absolutely poor".

[6] MESCT, Plano Estratégico do Ensino Superior 2000-2010
[7] Chissano, J. State of the Nation Address. Assembly of the Republic. December 2000

The gravity of the situation is mobilising social forces, and one notes a movement aimed at publicising messages on the dangers of the epidemic and how to prevent it. This brings together a wide range of forces from politicians at the highest level and of all sensitivities to spiritual and religious leaders, in an authentic crusade in what some sectors are now calling a battle for life. President Joaquim Chissano described the situation of the epidemic in the following terms in his State of the Nation address in 2000: "The death brought by HIV/AIDS is advancing with giant strides..... The youth, the lifeblood of the nation, is being profoundly affected. From the tests undertaken in some schools, we know that more than 20% of our future is doomed" (Chissano: 2000, 4).

The great unknown lies in assessing to what extent the messages will have an impact on the target groups. It is in these messages that hope lies, because the experience of other countries shows us that, despite its rapid spread in southern Africa, HIV is not propagated easily. Abstinence, or the correct and consistent use of condoms during "high risk" sexual relations, or sexual encounters with occasional partners - which are the main contents of preventive messages - together with the speedy treatment of other sexually transmitted diseases (STDs), and abstinence during the period of treatment, can reduce the spread of the virus.

How does HIV/AIDS affect human development?

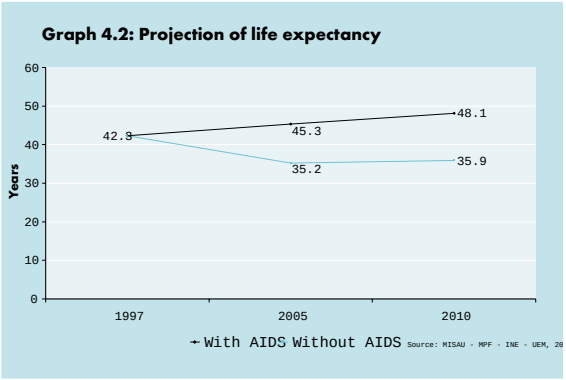
Life expectancy in Mozambique, estimated at 43.5 years in 1999, is among the lowest in the world. The 1998 Regional Human Development Report (RHDR) estimated that life expectancy in the other 13 member countries of the Southern African Development Community (SADC) in 1995 varied between 72 years in the Seychelles and, at the other extreme, 41 years in Malawi (UNDP-SADC-SARIPS, 1998: Table 1).

Life expectancy at birth is one of the main indicators used to measure the well-being of a population, and is one of the three variables used to determine a country's Human Development Index, alongside per capita income and educational level. HIV/AIDS attacks all three indicators directly or indirectly. Life expectancy in Mozambique is declining and within ten years it could be cut by a third because of HIV/AIDS.

However, as was shown in the 1999 report, life expectancy is an indicator which varies substantially from region to region within Mozambique, in accordance with the stage of development. The region with the highest life expectancy is the South - 46.5 years for men and 53.4 years for women. The Nrth is the region with the lowest life expectancy - 41.1 years for women, and 39.2 years for men. In the Centre, life expectancy is 38.8 years for men and 41.6 years for women. (UNDP, 1999: 25)

The low and differentiated life expectancy in the various regions of Mozambique is partly explained by asymmetries in economic development, the poor and differentiated coverage of the health services resulting from the combined effect of the colonial legacy and the armed conflict. The regions with low life expectancy and fragile human development are also those which have the highest indices of seroprevalence.

The reduction of life expectancy in Mozambique because of HIV/AIDS is in line with the trend noted in other



countries (graph 4.2). Life expectancy in Zimbabwe, for instance, fell from 53.4 to 44 years in a period of just three years (from 1996 to 1999), while in Botswana life expectancy fell from 65.2 to 47.4 years in the same period, with a negative impact on classification in the world ranking based on HDI (UNDP, 1998).

Impact on income

The impact of the epidemic on the economy has not yet been duly quantified in Mozambique. But preliminary estimates indicate that the aggregate value of Gross Domestic Product (GDP) could be 8-10% lower than the level it would have attained had the epidemic not occurred. This affects another important HDI component, income, in a country which, despite the improved performance in recent years, has one of the lowest per capita GDPs in the world.

Estimating the impact of the epidemic on the economy is also based on examples from other countries which faced HIV/AIDS earlier. For instance, it is estimated that the epidemic cost Namibia about 8% of its GNP in 1996. GDP growth in South Africa is forecast to be, on average, 0.3 to 0.4 percentage points below what it would have reached in a scenario without HIV/AIDS during the next decade (Quatteck, 2000). In Kenya, it is estimated that by 2005 the GNP will be 14.5% smaller than if there had been no AIDS (ONAP, 1999).

Overall economic growth has fallen drastically not only in countries with high levels of intensive use of labour in exporting industries (such as Swaziland, Tanzania and Kenya), but also in countries that are highly capital intensive in their exporting industries. Botswana is an eloquent example of this phenomenon.

The diversion of resources to finance medical care, together with the expenditure on combatting opportunist infections in HIV-positive people, as well as reduced opportunities for access to education, as we shall see below, and to other social services means that a large proportion of Mozambican households will see their survival opportunities shrink as a result of the epidemic, weakening still further their human development.

As the effects of the epidemic grow, so the ability of households to send their children to school will diminish, at the same time as the capacity of the education sector to carry out its task fully will also be severely affected.

Access to education, which is already very precarious in Mozambique, will be substantially affected. The availability of specialist teachers will decline sharply in a system where the available staff are already insufficient to cope with the needs. It is estimated that there are 43,156 teachers in the country - 38,279 in the two levels of primary education, 2,457 in the two levels of secondary education, 998 in elementary, basic and mid-level technical education, and 1,422 in higher education. These teachers are catering for an estimated school population of 2,360,798 pupils and students (INE, 1999).

Few countries have undertaken studies into the impact of HIV/AIDS on the education sector. As far as is known, Mozambique is the third country in southern Africa to take the initiative of making a detailed assessment of the impact of HIV/AIDS on the education system. The other two are Swaziland and South Africa. Mozambique's effort expresses the seriousness with which the authorities are taking the impact of the epidemic on the sector. The following section intends to offer an initial, preliminary, and far from exhaustive, approach to the possible impact of the epidemic on the Mozambican education sector.

HIV/AIDS and the education sector

The HIV/AIDS pandemic presents multifaceted challenges to the education sector. On the one hand, education must be structured so as to manage the effects of the epidemic in their various forms, from sickness and loss of teachers and the presence of infected children among the pupils, to the preparation of the system and of the teachers to attend to the special needs of a growing number of orphans. Furthermore, the sector will be called upon at the same time to play a vanguard role in the efforts to prevent new infections, while also discovering additional resources to sustain, maintain and improve quality, and expand access to education. It is a gigantic task, a well-nigh impossible mission.

It is undeniable that the education sector can play a key role in stemming the rise in the epidemic. The sector directly targets those who, because of their age, are part of the so-called "generation of hope" - those young Mozambicans aged 6-15 who are mostly not yet sexually active, and who are therefore not HIV-positive (with the exception of those cases in which the virus has not been transmitted sexually).

Education, in its widest sense, is crucial for an effective response to the epidemic. This is an extra burden on the education system and an added responsibility. The situation is worsened by the fact that the education system will have to struggle to play this multifaceted role in a context where the sector itself is being severely affected by the epidemic.

In order for the education system to respond to the needs of young Mozambicans, the sector must be able to respond to the threats which the epidemic poses to itself.

In recent years education sector professionals and those familiar with HIV/AIDS have undertaken research on how to proceed with effective sectoral impact assessments. While the number of such studies is limited (see Kelly, Carr-Hill, Kataboro and Katahoire, 2000, and JTK Associates, 1999), there is a growing understanding of the importance of accounting for HIV/AIDS impacts when planning the way forward for the education sector.

Impact of the pandemic

HIV/AIDS results in demographic, social and economic changes in society, changes that affect the education sector. These include impacts on the demand for education, specifically enrolment trends, school attendance, drop-out and repetition rates, and the growth in the number of orphaned children. HIV/AIDS specifically affects the education sector in the following ways:

- It has an impact on the demand for education by pupils;

- It has an impact on the supply of educators (teachers, administrators and policy makers);
- It has an impact on the quality of education;
- It has implications for the costs of the education sector, with costs rising, and the efficiency of expenditure falling.

The demand for education by pupils is affected by the increasing expense of education for households affected by AIDS, the opportunity cost of employment lost by children of school age, and the reduced number of children available for the system (due to a reduction in the birth rate, and the number of children who die before entering school). In Mozambique, where entry rates are low, as mentioned in Chapter 3, the demand for education tends to greatly exceed the supply. This means that the demand will remain unchanging even in the presence of the HIV/AIDS epidemic, and it will be supply that continues to determine levels of entry into education.

Furthermore, the supply of education is affected, as teachers, managers and others responsible for the system fall ill and die, thus reducing the provision of quality education. In addition, as the private and other sectors experience similar losses of skilled personnel, there may be increased poaching of teachers and managers from the state education system, further increasing the loss of skilled staff

The education sector is particularly vulnerable to the HIV/AIDS epidemic because of its high dependence on skilled human resources, and because it is necessarily dispersed throughout the country. In addition to being labour intensive in terms of human resource needs, education is skills intensive at management level. The impact of HIV/AIDS on the quality of education considers to what extent the education system produces efficient and effective results.

The analysis of the effects of HIV/AIDS on the quality of education assesses to what extent the epidemic affects the capacity of the education system to produce efficient and effective results (for example, the growing costs of education for households affected by HIV/AIDS, the growing number of orphans, the increase in drop-out and repetition rates, loss of productivity in the system etc...)

Cost implications include assessing increases in unit costs due to increased drop-out and repetition levels, tional costs resulting from the recycling and training of teachers, and increased expenditure on medicines and medical care, and on health benefits.

Impact on the demand for education

For the purposes of this study, demand for education is measured as the number of children likely to seek education over the period 2000-2010. In the Mozambican context this has been measured by determining the number of children within a specific age group likely to be in school.

The age groups used conform to those actually in school, and not those who are the correct age for school, since many pupils in Mozambique are, in theory, too old for the grades they are attending due to the repetition rates, late enrolment and other factors. These percentages were then applied to the population projections in the demographic model for the "without AIDS" and the "with AIDS" scenarios. The numbers in school were progressively increased over the projection period, based on the average growth in that

particular level of the Mozambican education system over the past five years.

There are at present some 2.6 million children in the Mozambican education system. The vast majority (87.9%) of these are in EP1. While the number of children in EP1 will continue to increase, even in the face of the AIDS epidemic, the rate of increase will decline. This results from fewer children being born as a result of the HIV/AIDS epidemic, while those who are born already infected with HIV die before they enter school. By 2010 it is estimated that there will be 13% fewer children in EP1 than would be the case without AIDS.

While the EP1 projections indicate a decline in the rate of increase in demand for education at this level (that is, demand will flatten), this does not imply that EP1 access objectives outlined in the Education Sector Strategic Plan will be threatened. The reason is that the system has expanded very rapidly over the past three years (1997 - 2000). Gross enrolment was close to 90% in 2000, which is the 2002 objective. However, as the epidemic progresses and the demographic structure of the population changes, these strategic planning objectives relating to access will be threatened.

In Mozambique, where many children are not in school, the understanding of the impact of HIV/AIDS on enrolment is complex. The assumption is that the lack of space at EP1 is not the main reason for non-attendance. Other, more qualitative, economic, social and cultural factors are involved.

However, at the higher levels (EP2, ESG1, ESG2 and technical schools), the lack of schools and their location is the main constraint on demand. The demand for education at these other levels (EP2, ESG1, ESG2, technical and higher education) may therefore not be directly affected by HIV/AIDS. At these levels the demand for education will be constrained by the lack of schools and their location, not by a decline in the number of students. As a result the number of children qualified for entry into higher levels of the system will continue to exceed supply substantially, despite a decline, due to HIV/AIDS, in the number of young Mozambicans of relevant ages for these school levels.

There are, at the same time, circumstances that enhance risk. These include wide age-ranges across students in the same class/classrooms, the need for many children to attend school away from home (only 67% of rural communities have a local primary school, and only 2% have a secondary school), and the fact that many teachers live away from home etc. All this transforms the school itself into a place of sexual contact, and therefore a place favourable for the spread of HIV (MPF, 1998).

Table 4.4: Evolution of the gross enrolment rate in EP1 by province and gender (%), 1997 - 2000

Province	1997			1998			1999			2000		
	MW	M	W	MW	M	W	MW	M	W	MW	M	W
C. Delgado	91.1	105.5	76.8	99.2	112.8	85.7	103.7	114.8	92.9	134.7	149.1	120.5
Gaza	96.4	99.2	93.8	106.9	109.2	104.6	116.4	118.0	114.8	118.3	118.4	118.2
Inhambane	94.9	98.8	91.1	98.3	101.1	95.5	110.7	112.7	108.7	116.6	119.4	113.7
Manica	83.5	98.1	69.1	84.6	95.9	73.5	96.7	109.1	84.3	105.7	116.7	94.7
Maputo	108.1	111.5	104.8	101.1	103.1	99.2	112.8	113.7	111.9	121.9	119.8	124.1
Nampula	85.1	99.5	70.5	80.9	91.3	70.3	92.6	101.2	83.9	100.8	108.3	93.3
Niassa	97.6	110.9	84.2	105.2	115.6	94.7	97.2	104.2	90.3	115.0	124.1	105.9
Sofala	65.9	81.1	50.8	70.6	86.1	55.0	93.9	109.1	78.7	99.4	112.1	86.6
Tete	77.0	85.7	68.4	92.2	100.6	83.8	94.6	102.2	86.9	102.9	109.1	96.7
Zambezia	90.8	104.7	76.8	88.4	100.2	76.5	115.2	129.1	101.1	125.6	137.1	114.0
Maputo City	73.0	74.5	71.5	80.1	81.6	78.7	92.0	91.2	92.9	106.3	104.6	108.0
Total	86.9	98.1	75.7	89.4	98.8	79.9	102.5	111.3	93.6	113.3	121.2	105.4

M - Men; WM - Women
Source:MINED, 2000

These factors, both positive and negative, place additional burdens and costs on the educational system, requiring time-consuming and costly curricular changes, teacher training interventions, extra-curricular school-based interventions, enforcement of laws about teacher-pupil sexual relations etc.

Impact on the supply of education

The supply of trained educators is perhaps the most critical constraint on the ability of the educational authorities to achieve their objective of universal access to basic primary education and quality improvements, and the longer term goal of universal access to full education. Unfortunately, it is precisely here - the supply of educators - where AIDS will take its toll in Mozambique.

Over the period 2000-2010, the AIDS epidemic is projected to result in the education sector losing some 17% of its personnel. Across all levels, some 9,200 teachers will die and an estimated 123 senior managers, planners and administrators will be lost. For each of these educators months of productive work time will be lost before they die.

Because the central region has the highest levels of HIV prevalence, it is projected to lose the highest percentage of teachers (23.3%). And because this is the region with the highest number of educators in the system, over half of all teachers (53%) who die will come from the central provinces of Manica, Tete, Sofala and Zambezia.

In order to maintain the system at present levels of access and quality, trained teachers and senior personnel will need to be replaced. In order to accommodate the loss of trained teachers alone, basic teacher training will need to expand the number of trainees in the system over the ten year period by 25% solely due to HIV/AIDS. In order to replace teachers with university degrees who die of AIDS, training at this level will need to expand by 28%. It is not clear to what extent the system is structured to absorb these effects, but the fact that there is a reflection is, in itself, a positive sign.

Table 4.5: Teachers working in each level of public education in 1999

Province	EP1		EP2		ESG - 1st cycle		ESG - 2nd cycle	
	W	MW	W	MW	W	MW	W	MW
C. Delgado	214	2.609	16	260	3	103	4	34
Gaza	1.257	2.677	85	428	17	156	2	21
Inhambane	902	2.622	81	387	30	187	5	23
Manica	376	2.005	41	322	14	93	1	24
Maputo	1.061	2.397	106	500	51	254	2	19
Nampula	827	5.950	82	631	29	199	4	35
Niassa	451	2.262	20	338	3	117	0	17
Sofala	365	2.027	103	415	16	132	0	26
Tete	661	3.026	52	363	14	157	7	33
Zambezia	726	5.335	56	487	21	169	5	27
Maputo City	1.478	2.453	292	785	151	541	27	90
Total	8.318	33.363	934	4.916	349	2.108	57	349

Source: MINED

The forecasts mentioned above do not take into account the likelihood of an exodus of teachers attracted by other economic sectors, particularly public and private companies who will also suffer the effects of the epidemic and will need to find replacements for their qualified staff who fall victim to AIDS.

The pressure on the few qualified staff in the country will increase and, as a result, they will demand better conditions (wages, housing, transport etc.), which the education system will find difficult to satisfy. The sector is already feeling these problems, particularly due to the recent increase in economic activities and the appearance of major new companies. By

way of example, several schools have mentioned losing teachers who have gone to work in major companies such as Mozambique Airlines (LAM), Mozambique Telecommunications (TDM), the MOZAL aluminum smelter and others. Box 4.2 presents extracts from the Strategic Plan for Higher Education for the decade 2000-2010, which highlight some of the reasons for the exodus of lecturers in higher education.

Who wants to be a university lecturer?

Box 4.2

"The state pretends that it pays us and we pretend that we work" is one of the most common expressions among Mozambican state employees. Lecturers in public universities, who have the noble task of training the future cadres and leaders of the country, are no exception.

Wages in meticais in the two oldest higher education institutions, the Eduardo Mondlane University (UEM) and the Pedagogic University (UP) reached a peak of US$ 750 equivalent in 1990 for assistant lecturers. From that date, they have gradually fallen, and hit US$ 220 in 1997.

lecturers in public universities are part of the public administration, and their wages are fixed by the government merely on the basis of their academic qualifications, rather than their performance and their competence as teachers or researchers.

There is no system of incentives, nor of bonuses based on performance, which does not encourage high quality work. In order to get round these situations, some extra benefits have been introduced for university teachers including, among others, low-cost housing.

The situation is rather better in the private higher education institutions where the minimum wage is around US$ 1,000 a month, and wages reach US$ 3,000 at the top of the scale. This sum is almost three times the wages paid to full professors in the public higher education institutions.

It is hardly surprising that many teachers become a species of travelling salesman of knowledge within the system, or teach merely for "love of the club", which brings damaging consequences for the quality of training.

Adapted from the Strategic Plan for Higher Education, 2000-2010
Ministry of Higher Education, Science and Technology, July 2000

Impact on the quality of education

The discussion above does not take into account the reduction in demand for education due to the impact of HIV/AIDS at the household and community levels. These comprise qualitative impacts resulting from the systematic decline in household economic status as AIDS progresses. Studies in Uganda, Tanzania and Zambia uniformly conclude that children in households where one or more adults are affected by AIDS, or where the children are orphaned, are the first to lose access to education.

While the war provided Mozambique with experience in coping with the problem of orphans, studies elsewhere demonstrate that, at the peak of the epidemic, the expectation that communities and extended families can continue to absorb orphans becomes, in practice, unworkable (Hunter and Williamson, 1997; Hunter, 2000; Rugalema, 1999).

Currently there are around 500,000 orphans in Mozambique, some two-thirds of whom are AIDS orphans. As shown in Graph 4.3, this is set to rise to over 1.5 million AIDS orphans by 2010. These children are negatively affected for many reasons. Among these are the fact that poorer households are more likely to take in orphans than their wealthier counterparts, and that these households bear additional costs leading to their overall impoverishment. In addition, children's new status as orphans takes its toll and leads to non-attendance at, or dropping out of, school.

These impacts on quality in Mozambique will be widespread. At EP1 this will lead to increased distortions in who has access to education and who does not have (e.g. poorer households, rural households etc).

HIV/AIDS profoundly affects families and communities, resulting in the loss of labour and assets, as well as socio-cultural skills, and places almost unprecedented stress on community and extended family networks. These result in the withdrawal of children from the education system, even when education is provided at no cost, as their labour is required to replace that of adults who become sick or die, as well as to care for the sick.

Tradition dictates that under these circumstances, more girls than boys are likely to be withdrawn from school, mortgaging their own future and that of the country and worsening gender inequalities. Empirical studies also show that under the same circumstances, it is the girls who look after sick parents, or replace their labour at home or in the fields. This will put to the test Mozambique's efforts to increase the number of girls in the education system, particularly in the centre and north of the country. The epidemic may erode these efforts.

Furthermore, children who come from AIDS-afflicted households, or who are orphaned, are traumatised and suffer emotionally. This affects their ability not only to stay in school, but also to learn and progress. This has an additional impact on drop-out and repetition rates.

In many countries in southern and eastern Africa the rise in the number of orphans is taking place in a situation where household and community strategies to deal with the impacts of the epidemic are no longer effective.

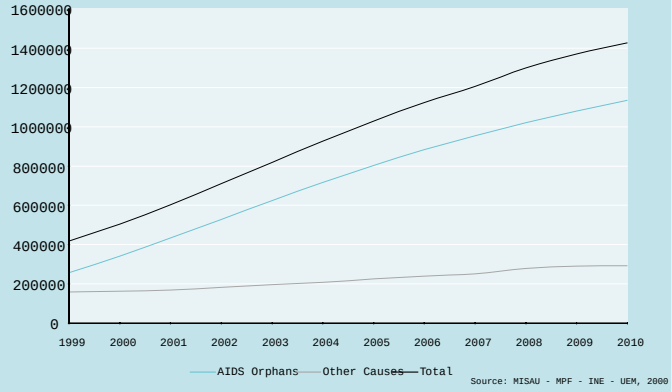
The assumption that in Mozambique the family and the community will cope with the impact of AIDS at the household level, and with AIDS orphans in particular, is erroneous. Instead, support for the well-being of orphaned children, including access to care, security, shelter and social services, including education, from a wide range of sources will be indispensable under these circumstances.

Counting the additional costs

The HIV/AIDS epidemic will reduce the efficiency of the education sector and increase costs throughout the system. Additional costs alone are expected to exceed 1,900 billion meticais (about US$ 110.5 million). This represents additional costs to the system of 6.9% just due to HIV/AIDS. This is an underestimate because some costs cannot be quantified based on available data, and because it assumes that the Ministry of Education will bear no costs associated with expanded HIV/AIDS prevention activities by, or within, the sector.

A large part of these costs arise from HIV/AIDS-related sickness and death benefits (750 billion meticais), and to a lesser extent from expanded teacher training costs (187 billion meticais). There are also costs associated with increased inefficiencies in the system, most notably increased drop-out and repetition rates (936 billion meticais). With education

Graph 4.3: Population of orphans (0-14 years)



currently receiving some 14% of the national budget, these losses will have a significant impact on the ability of the state to cover these additional expenses.

Challenges of the future

The school system is viewed, not only in its classic role as a vehicle for imparting knowledge, but also as a means for informing children about the dangers of HIV/AIDS, and empowering them to be able to respond effectively to the epidemic, and protect themselves from infection. So that the system may play this role, the challenges posed to it by HIV/AIDS must be considered. The most serious impact for Mozambique will be on the supply of trained teachers.

Since, in general, educators are respected people, or are among the few who have any formal academic education in the community, they will be called upon to interact not only with children and parents, but also with the surrounding communities to spread messages on how to prevent HIV infection, and of respect for HIV/AIDS patients. This increases the burden of responsibility on them, particularly because they must also set an example of good social conduct in practice. The school will be an important centre for activities aimed at blocking the spread of the epidemic.

Main lessons

One major lesson learned in countries neighbouring Mozambique is that those children who are not sexually active must learn the lessons of abstinence, protection and prevention.

These are the 6- to15-year-olds, who are known as "the window of hope" in combatting the disease (in Mozambique the average child becomes sexually active at 16 years of age, but many start earlier).

Presently, in the government strategy for combatting HIV/AIDS, education's contribution is targeting secondary school students, though it does state that those at the primary level will be "included". The logical explanation is that this is the level where, in theory, sexually active children are to be found. But, as mentioned in Chapter 3, 96% of the school population is concentrated in EP1 and EP2, and secondary education as a whole accounts for just 3% of the school population. This raises some problems and suggests that perhaps the exclusive emphasis of the campaign on secondary education, despite its logic, may not be the most appropriate approach to fighting the epidemic. The Ministry of Education and its partners need urgently to work out a response to protect this "window of hope".

The second major lesson learned from elsewhere in the region is that HIV, despite its rapid spread, can certainly be prevented, and that the five out of six sexually active Mozambicans who are not infected can still avoid infection. This implies that the vast majority of Ministry of Education personnel are not infected, and therefore timely interventions to protect them, through knowledge, understanding and empowerment, can assist in protecting the sector from the devastation of HIV/AIDS.

A third lesson learned from elsewhere in the region is that those who are already HIV-positive can live a long and fruitful life. This holds for infected education personnel as much as for anyone else, but only if they understand their condition, protect their partners, know what their rights are, help to improve

public understanding of HIV/AIDS, and increase compassion towards those who are HIV-positive.

A final lesson, learned from Tanzania and Uganda, is that the introduction of more flexible school calendars, adjusted to meet peak family farm labour demand, can assist in keeping children in school in the face of the epidemic.

In short, education can both play a preponderant role in protecting the window of help, and can itself become a great gateway of hope, both for the protection of its own staff and for the survival of society at large.

By its very nature, education is one of the few sectors which can influence changes in attitude towards the epidemic in an efficient and effective manner. We must recognise that, faced with the threat of HIV/AIDS, human development in Mozambique depends to a large extent on the will and determination of professional educators in taking the leadership in the struggle against the epidemic. But society cannot wriggle out of its responsibilities since, in the final analysis, the struggle against the epidemic, is essentially a struggle for life, and nobody can set themselves apart from this responsibility.

Contours of an ambitious and elusive target

The conceptual framework set out in Chapter 1 describes the linkages between the human rights approach and the human development approach in analysing and measuring progress, in which education figures prominently. As mentioned earlier, the Universal Declaration of Human Rights enshrines education as a fundamental right of human beings. For its part, the human development perspective, made operational in the GHDRs since 1990, considers access to formal education, in order to develop skills such as reading, reading and basic arithmetic, as a crucial dimension in people's choices.

Education allows individuals to develop, in addition to basic skills, the abilities needed to live and work decently, to take part in economic and social development, to take informed decisions about their lives and their communities, and to go on learning throughout life.

The two approaches converge in the direction of pressing countries such as Mozambique to take action in order to provide an ever larger number of their citizens the right to access to school education, in order to respond effectively to the challenges of development and, in the process, to pursue the principles enshrined in the international conventions the country has signed.

The central objective of this Report was to analyse both the progress and the challenges that the country has faced and continues to face in pursuing this noble objective. When compared with the colonial heritage 25 years ago, Mozambique has made substantial advances in broadening access to education for its citizens.

The data that give this Report its substance confirm that, once the constraints imposed by the war were overcome, and regardless of the disturbances arising from conjunctural questions, education was again transformed into one of the most dynamic components of the country's HDI, together, in recent years, with income expressed in real per capita GDP. The positive evolution of the country's overall HDI, described and analysed in Chapter 2, illustrates exactly the direct results of this effort.

But it is clear enough for everyone that Mozambique still has a long way to go before it can satisfy the imperative of universal basic education, and the provision of enough skilled personnel to raise the country to other stages of development. Apart from the effort to broaden access, there remains the challenge of making the school an institution that provides scientific knowledge, while at the same time training individuals with a high degree of self-confidence, endowed with socially accepted moral and ethical values, rooted in the national culture.

There is no doubt that the country is on the right path, but the target is still distant. Despite a substantial reduction in illiteracy, Mozambique continues to have the lowest literacy rate of the 14 member countries of the Southern African Development Community (SADC), which limits the choices of Mozambicans and is reflected in high indices of privation in many development privations.

The challenges posed to the education sector in Mozambique are multifaceted. Mozambicans must make efforts to

mobilise the human and material resources needed for expanding access so that, in the long term, the country can, for example, guarantee seven years of universal basic education, and gradually advance towards the introduction of compulsory schooling. In overall terms, it is estimated that only 37% of Mozambican children are inside the formal education system.

Still more serious is the fact that, in the context of the asymmetric development of the country's various regions, it is access to education which reflects, in the most explicit and flagrant manner, the distance separating the south of the country from the centre, the northern region from the centre and the south, the urban centres from the countryside, and men from women.

Although, in aggregate terms, 39.5% of the population is literate, isolation from the world of reading and writing is not distributed uniformly across the country. For instance, only in Maputo City and Maputo Province are 50% or more of the population literate.

The incidence of illiteracy remains particularly acute among women, where the illiteracy rate is 74.1%. Among peasant women the rate rises still higher, with only one in ten knowing how to read and write - an illiteracy rate in the order of 89%.

The low level of schooling is obviously reflected in the lower HDIs and GDIs in the provinces of northern and central Mozambique. Planning the expansion of the school network cannot escape from the reality of a differentiated supply of education between the various regions of the country, and the difference between men and women in terms of access.

In recent years the education sector has accumulated relatively deep knowledge of its performance, problems, challenges and constraints. Since 1996 education has been undertaking a strategic planning exercise, which advocates expanding the supply of educational opportunities, as well as a series of activities aimed at reformulating the content of schooling, so as to improve the quality of the education offered and strengthen the capacities to administer and manage the education system.

More of the same will not balance the equation

The data analysed in this Report show that illiteracy is relatively rural and female, and it will be difficult to attack this problem successfully while some basic constraints remain untouched. For example, there is the need to implement, with vigour and pragmatism, programmes and strategies for lifting levels of access for girls from the current 43% at least to levels which reflect the percentage of women in the population, and to guarantee that they stay in the system until they graduate.

The social benefits of education are universally recognised. When the female population is educated, infant and maternal mortality rates fall drastically. The level of consumption of households which include a woman with some education increases substantially. It is recognised that when the level of education of women rises, the likelihood of children under five completing the vaccination cycle increases, which in turn leads to a decline in the under five mortality rate. The extremely high rates of illiteracy among women in Mozambique are determinant factors in the prevailing sharp levels of deprivation, and should therefore be the target for urgent correction.

The obstacles presented by the curriculum structure of EP2 will have to be properly dealt with. The curriculum's

demands in terms of teachers and resources prevent expanding EP2 on a mass scale across the countryside, accompanying and/or complementing the pace of expansion of the EP1 network.

Mozambicans participated en masse in the literacy campaigns carried out in the initial post-independence years, and these campaigns made a noteworthy contribution to reducing the illiteracy rate. But the movement to provide adults with reading and writing skills on a mass scale did not survive the shock of the crises cased by the war, the poor performance of the economy - and the disenchantment caused by the content of the literacy programme.

When the programmes were evaluated, the reasons why the popular impetus that characterised the early days of the campaigns later ebbed away were identified. The use of Portuguese as the medium of instruction to the detriment of the national languages, the irrelevance for practical life of the knowledge taught, the almost exclusive dependence on voluntarism in implementing programmes, and the marginalisation of traditional wisdom, all acted to sap motivation. These and other factors should be studied in greater depth before embarking upon new exercises intended to revive interest in literacy among the adult population.

The greatest challenge to the system is to find the appropriate formula to inspire once more the popular enthusiasm that characterised the initial experience of the literacy campaigns. The use of national languages could be one of the stimuli. But one cannot relegate to a secondary position the need, apart from respecting local cultural practices, to ensure that the knowledge taught to adults has practical, immediate and functional applications. That way the public concerned would not regard the effort spent on learning as an opportunity cost, whose hypothetical benefits did not compensate for the effort.

Generally, adult minds are selective about what they learn. As a result adults do not learn everything that is taught to them, but only that which the rational mind regards as necessary to learn.

This will impose on education the need to learn how to enter into a dialogue with society, to be inspired by its practices and values so that, at the end of the day, it may awaken and encourage the interest of the community in taking part in the design and implementation of education programmes for themselves and for their children, and in influencing the content in accordance with their own interests and priorities.

This transformation, which in many aspects is already taking place, demands from educational planners and managers greater flexibility, a spirit of openness and a new attitude, particularly as regards the tendency to establish hierarchical relationships with the communities, which currently characterises the dialogue.

The disillusion with the effectiveness of the SNE, and its being held responsible for the supposed crisis of values in today's youth should not cause dismay among the staff of the sector. On the contrary, this critical attitude reflects the importance that society attributes to education as a priority instrument for the all-round training of individuals and of their role in promoting a balanced and healthy socio-economic and cultural development.

However, rather than just the good intentions of broadening access to all corners of the country, one must face the problems of education with the realism and pragmatism they deserve - all the more so in order to avoid expectations out of line with the sector's capacity to

achieve them. The intention to establish conditions to provide all citizens with educational opportunities at all levels, even with the advent of technology, is an objective that can only be attained in the long term. Supplying good quality education, as well as multiplying learning opportunities, is a noble mission - but also a difficult, complex and expensive one.

The analysis of the functioning of the education system in Chapter 3 clearly shows that Mozambique does not possess, nor will it possess, over the medium term, the human and material resources needed to guarantee universal access of its youth to the various levels of education. About half the resources spent in the education sector come from foreign aid.

Clearly Mozambique still has some room for manoeuvre, because total expenditure on the sector expressed as a percentage of Gross Domestic Product (GDP) is still relatively low when compared with other countries in the same conditions. Mozambique spends 2.3% of its GDP, while the average of the countries eligible for HIPC is about 4% of GDP. The temporal series for this indicator suggests that the country is making this effort: expenditure on education as a percentage of GDP advanced from 1.6% in 1995 to 2.3% in 1999.

However, we must recognise that, even if the country increases the resources allocated to education so that they reach the recommended 4% of GDP, Mozambique is going to continue needing international assistance in financing education in order to expand learning opportunities for an ever-increasing number of Mozambicans and to ensure sustainable development. Although access to school education is recognised as a fundamental right, good will is not sufficient to bring it into being. The availability of resources is always a determining factor in limiting access.

But it is also necessary to acknowledge that there are structural and programmatic factors that do not depend on outside partnerships. Solving them is up to Mozambicans, and is perfectly within their grasp. The sharp narrowing of the educational pyramid that characterises even the two levels of primary education, as well as the gap between primary and secondary education, together with the high repeat and drop-out rates, illustrate problems of inefficiency which unnecessarily limit supply, and contribute to exclusion.

The need to provide the children who enter the system with the possibility of completing the two levels of primary education, EP1 and EP2, is unquestionable. It is a development imperative and an inalienable right of Mozambican children, comparable to the right to a birth certificate or an identity card.

The huge discrepancy between the number of pupils in EP1 and in EP2 is a distortion that requires an urgent solution. In 1999 there were about 2.1 million pupils in EP1 and only 186,277 in EP2. This was a transition rate from one level to the next of less than 10%. The need to correct this discrepancy takes on greater relevance when we bear in mind that children who leave the system before consolidating their basic knowledge can easily slip back into illiteracy, thus wasting the efforts spent on training them during their brief contact with the school. Curriculum reform seeking to adjust EP2 to existing conditions and to the reality of the country is an important step towards solving this problem, which basically affects the children of peasant families.

Furthermore, the education of children based on the assumption that they

will progress to the subsequent stage, particularly as regards the transition from EP2 to ESG, and from ESG to higher education, has been shown as not only impracticable and utopian in many circumstances, but also inefficient and expensive for a country with scarce resources such as Mozambique.

The challenge here is to design curriculum contents which allow all those who have access to education in Mozambique to draw the greatest possible advantage from their contact with the school, providing them with instruments to broaden their horizon of choices as autonomous individuals and to improve their lives and those of their communities. This assertion is valid for all levels of education.

Since EP1 and EP2 cover 96% of the student population, it is obvious that these levels constitute the front line in efforts to make education relevant for the autonomous lives of new generations, and for the profit of the communities they come from. How is this to be done? As was argued earlier, there are no ready-made recipes. The sector's staff, the government, society, and international partners can, through a process of collective reflection, set about finding creative and appropriate responses to the challenge facing them. But one thing is certain. The contents of the education programmes currently undergoing reform will necessarily have to deal with and accommodate the reality or realities described here.

Charity begins at home...

The education sector has been benefitting from substantial contributions from the international community to implement its programmes. As in any situation of dependence on foreign contributions, the only certainty is that the levels of funding will not remain unaltered for very long.

And this trend is already visible, in relative terms. The weight of grants in the total education budget dropped from 63.3% in 1994 to 42.5% in 1999. Fortunately, this relative reduction did not lead to a decline in the resources allocated to education because it was compensated for by growth in absolute terms in the sums mobilised internally and made available through the state budget, thanks to the increase in resources generated by the economy.

But it is important to keep in mind the train of thought expressed in Chapter 3. Mozambique spends the equivalent of 2.2% of its GDP on education, which is relatively low when compared with other countries who, like Mozambique, have been declared eligible for the Heavily Indebted Poor Countries (HIPC) debt relief initiative of the World Bank and the IMF. As mentioned earlier, the average in the other countries is around 4% of GDP.

The authors recognise that in a country with levels of privation as high as they are in Mozambique, all sectors are priorities because the allocated resources rarely cover the needs. The positive value of the indicator mentioned above is that it suggests that Mozambique still has broad room for manoeuvre to increase substantially the amount of resources allocated to education and to reduce, gradually and substantially, dependence on foreign aid to fund the sector. International aid is welcome, but generosity and charity, as the old adage states, begin at home...

Furthermore, the few resources available could be better used. For example, it is indisputable that the material, human and

financial resources mobilised each year to accommodate more than 400,000 pupils who repeat their grades thanks to the inefficiency of the system constitute a luxury the country cannot afford to finance for ever. For each desk occupied by a chil who repeats a grade, there is another child being deprived of his right to school education.

It is imperative that mechanisms be instituted which guarantee that the resources allocated actually arrive and have an effective impact on the institutions where the teaching-learning process unfolds. The centralisation of administrative and financial management is perhaps not the most effective way of implementing programmes and projects because, among other aspects, it does not hold responsible those upon whom, in the final analysis, their implementation depends.

Broadening the supply of educational opportunities will require creativity in mobilising resources to finance the expansion of the network. The education sector should expand and deepen its dialogue with society so as to find viable, practicable and sustainable solutions to the problems of expansion and quality, seeking to this end endogenous alternatives that reduce current levels of dependency. Hence the need also to develop and consolidate the institutional capacity of the system at all levels.

It is thus becoming imperative to rescue the slogan "rely on our own forces" in its most genuine sense. The problems of education are Mozambican problems and therefore their solution essentially depends on the men and women of Mozambique.

The involvement of the private sector and of other social actors such as religious bodies, local authorities and community and local initiatives can allow exploitation of synergies with the public sector in providing opportunities for access to education. The experience of other countries in the creation of this sort of synergy in the sector includes examples such as the establishment of state subsidies per pupil in private or community schools, the building and delivery of schools built by the various social agents, or the community management of public units. These could be explored with greater dynamism.

In this process it is pertinent to ask some preliminary questions. Are there incentives that would make private or community bodies interested in building new schools or in maintaining and managing state schools? Is there a role for the local authorities and other local state bodies in supplying education? In the current legislation are there not bureaucratic obstacles which, through their excessive zeal, end up by discouraging the involvement of other social actors? Is there any possibility of applying the Sponsorship Law to initiatives that promote the expansion of educational opportunities? Are there no instances in which much higher demands are made of private and community initiatives than are made of public ones? Is this not an obstacle to broadening school opportunities? These and other questions deserve the reflection of all those engaged or interested in education.

An imponderable called HIV/AIDS

The reform and expansion of the system is occurring in a context where the education sector itself is suffering the effects of a phenomenon which threatens to knock down all the gains made since the relaunching of the sector in the post-war period, and to force a reformulation of strategies and programmes.

This is the spread of the HIV/AIDS

epidemic, the general effects of which on Mozambican society, and on the education sector in particular, were discussed in Chapter 4. This epidemic, which is affecting millions of Mozambicans, will force upon the sector an additional organisational and structural effort to ensure that its negative effects can be minimised. It is estimated that 1.2 million Mozambicans are infected with the virus. AIDS has caused a disproportionate increase in the number of deaths in the country and the official estimates tell us that the epidemic has dramatically increased the number of orphans.

The major challenge in facing HIV/AIDS is that education will be called upon to play a significant role in any national strategy to hold back the spread of the epidemic, at a time when the sector itself is being harassed by the negative effects of the epidemic.

Preliminary estimates indicate that the sector may lose 17% of its staff. That represents the loss of 9,200 teachers and 123 senior managers. The central provinces, where the largest number of teachers are concentrated, will lose the highest percentage of educators, about 23%.

HIV/AIDS will thus impose profound changes on education. The sector should prepare itself to deal with the eventual loss of teaching and managerial staff, with high costs in human and material resources.

The loss of staff caused by the epidemic will extend to other economic and social sectors. This situation will expose education to assault by other economic sectors who will try to compensate for the loss of staff who have fallen victim to AIDS by tempting teachers and educational managers with offers of conditions that the public education sector will find it difficult to match. It is urgent to find mechanisms to prevent the likely aggravation of the drainage of educational staff to other sectors, which could create a vicious cycle and undermine the country's development potential over the medium and long terms.

A considerable part of the school population will consist of orphans whose parents have succumbed to the epidemic. In 1999, the number of orphans whose parents died of AIDS was estimated at 258,000. The orphans will need special educational care in order to overcome the traumas arising from the deaths of their parents, and the system will have to prepare itself properly to provide such care. This will require specific training making it possible for educators to deal adequately with the special needs of this category of pupils.

The financial costs of the HIV/AIDS epidemic in the education sector are estimated at an additional US$ 110.5 million over 10 years, excluding expenditure on prevention. These additional sums will be spent on medical care, the training of additional teachers, payment of sickness benefits, and also include the costs of inefficiency derived from worsening repeat and drop-out rates which are already very high.

Protecting "the window of hope" and beyond...

The strategy for fighting the epidemic should rest fundamentally on protecting the so-called "window of hope", that is, the children who are not yet sexually active who can learn early and better the lessons of abstinence, protection and prevention. This implies targeting the current preventive campaigns on HIV/AIDS at younger age groups, and therefore making appropriate adjustments

in the messages of those campaigns. Instead of stressing only the use of condoms or safe sex, for instance, the messages could envisage aspects inducing changes in sexual behaviour and attitudes.

Apart from children of ages when they are already regarded as sexually active, the campaign should also, and quickly, cover sub-group in the six to 15 year olds range. This recommendation is particularly pertinent if we consider that only about 45 of the student population is in the secondary, technical-professional and higher levels of education. The vast majority are in EP1 and EP2.

The strategy for fighting the spread of the epidemic should take into account the fact that the majority of educational staff are not infected. Consequently, timely interventions to protect these professionals through deepening their knowledge and understanding can help protect the sector against the devastation of HIV/AIDS.

In addition, it is necessary to create an awareness among education professionals that being HIV-positive is not necessarily a death sentence. HIV-positive people can lead long and full lives, and that is also valid for education staff infected with HIV. There are practices that have been tested and developed which contribute to prolonging the life of HIV-infected people who live "positively". When educators and educational managers understand this reality in depth, they will be better able to help transform the perception of their pupils and of society in general concerning the epidemic.

A further important aspect is bringing school timetables into line with the requirements of household work in rural areas. The spread of the epidemic could lead to higher levels of dropping out and of poor academic performance among girls, as they are called upon to care for sick relatives or to take on additional responsibilities after the death of their parents and of other adults in the household. This adjustment to the timetable could help keep children, particularly girls, at school, despite the spread of the epidemic.

Education can also play a preponderant role in protecting the younger generations, as it can and should be a gateway of hope for the protection of its own staff as well as for the survival of society in general, as the centre of gravity of preventive activities. Through disseminating information on HIV/AIDS, education would contribute not only to halting the spread of the epidemic, but also towards creating a new social mentality towards the disease, allowing people to make informed choices.

We make our own path as we go along...

The main purpose of this Report was to reflect upon the place of education in expanding the choices of Mozambicans. There were two main reasons behind selecting education as the theme: first, education is one of the pillars of the concept of human development and features as a variable in calculating several of its composite indicators developed to this end.

Secondly, education was always a sensitive and central matter in the post-independence development of Mozambique. The main purpose of this Report was not only to make an analytical description of the various stages of the development of education over the past 25 years, but also to raise problems, question directions and successes, identify obstacles, problematise choices and discuss their relevance for society.

The report presents readings and perceptions on the relevance of the current education system, from the perspective of assessing to what extent it has contributed increasingly to expanding the choices of Mozambicans. The analyses were always undertaken from the perspective of judging to what extent education is providing Mozambicans with that they need to allow them to eliminate shortcomings and privations, endow them with the knowledge needed to fight against exclusion and to improve their social condition as members of a community or communities. The analyses tried to adhere to with rigour to the principle of stripping the analyses of any pretension to present ready-made solutions.

More than just complex analyses and the presentation of formulae, the authors have tried simultaneously to reflect and share information on education with users of the Report, with the intention of awakening greater interest and encouraging wider reflection on the part of the various groups directly or indirectly involved in the educational process from a human rights perspective.

The more demanding reader, who expected to find great solutions to the enormous problems of education in Mozambique, may perhaps feel a certain sense of frustration on reaching the end of the Report. To some extent he/she may be right. But the authors, who included education professionals, have always been careful to warn that there are no magical formulae for the problems of education, not in Mozambique, and not in any other country. Each country finds, in its own way, the best formula for providing school education adequate to its conditions and priorities.

In this Report, among other aspects, an attempt was made to show the journey traveled so far, and that which still has to be travelled, the lessons and the imposing challenges to be faced. Education has the heavy responsibility of ensuring the training of Mozambicans capable of liberating themselves, transforming and influencing the space that immediately surrounds them, and developing in a sustainable fashion the available material resources - as well as, and why not, influencing as far as possible the destinies of the world in the fora among the concert of nations in which Mozambique is a member.

One of the lessons learnt in analysing the data contained in this report is that Mozambique still has a long road ahead. Seeking for solutions to the problems of education, like any other development process, is not something linear. The trajectory of education in Mozambique proves precisely what the poet wrote a long time ago: when you walk, there is no path, you make the path as you go along. The target of providing education for all Mozambicans and the merits of the effort remain valid and clear. But the paths by which that target can be reached remain elusive, sinuous and accident-prone.

Crisis of values and the educating mission of the school

Box 5.1

Human behaviour is, in the first instance, conditioned and shaped by socio-historical factors. It is thus worth stating that human beings are educated fundamentally by the circumstances (social, cultural, economic and political) that surround them.

Through education, in its broadest sense, individuals appropriate, and place within themselves, the values that sustain society. In this sense all of social life, in its various expressions and practices, is an educational or socialising space, creating a multiplicity of reference points which guide the actions of individuals.

In Mozambican society there is a generalised idea of a crisis or "reversal" of values expressed in collective or individual behaviour, the reference points for which are not adequate to the standards of behaviour that society had established in the not so distant past.

Although the ways in which children and young people are socialised are increasingly diversified, which partly reduces the preponderance that the family and the school used to enjoy, Mozambican society continues to grant these institutions the greatest responsibility for the education of new generations.

As a result of this, many people hold the family, and particularly the school, responsible for the current "crisis" of values. Without doubt, both the family and the school play, for better or for worse, an important role in shaping the behaviour of individuals. It must be recognised, however, that both institutions reproduce the dominant social values. Furthermore, it is important to note that they are not the only spaces where children and young people are socialised, and thus cannot, in the final instance, be the only ones responsible for the "crisis" of values.

Society is right when it denounces the fact that most Mozambican schools have neglected their educational role, by limiting themselves to instruction. Schools must take on board again their noble task of educating. But the Mozambique of today is undergoing major changes which have deeply affected the ethical and moral reference points of society, creating a climate of uncertainty about what should be taught to new generations. This state of uncertainty partly explains why schools, and even families themselves, have pulled back from their educative role.

For schools to resume ethical and moral education involves clarifying and defining a system of values that is broadly shared by the multiple social and cultural diversities that form Mozambican society. At the same time, it requires social acceptance of the principle of tolerance, given the plural character of Mozambican society.

On the other hand, the great challenge posed to the schools is concerned with how to inculcate values. Because educating people in values is not the same thing as indoctrination. It is not a case of treating the person absorbing the education as a mere executor of norms imposed upon him or her. The practice of ethical and moral education should assume the principle of argument: that is, it explains the rationale behind social rules and norms. Thus children and young people should be put in learning situations where they can identify good or bad, just or unjust, honest or dishonest.

Furthermore, ethical and moral education requires from the educator respect for the freedom of the learner and patience, necessary for maturing his or her responsibility. The educator must know how to organise environments propitious for the students learning how to construct their own reasoning, to defend and to argue their points of view and of action rationally. It is important to create learning environments where the learners feel responsible, that is, capable of giving an account of their acts. Responsibility is a fundamental condition of the autonomy proper to human beings.

To develop authentically autonomous individuals is the main objective of education. As the former Director-General of UNESCO, Frederico Mayor, said, nowadays one cannot reconcile education with docility or submission. On the contrary, education should forge the character and the intellect of human beings, endowing them with sufficient autonomy so that they can reason and decide with the greatest possible freedom, and thus attain "personal sovereignty", the most relevant of sovereignties. Education for personal autonomy has today become more imperative than ever, because we are living in a fluid world and time, where there are few certainties and multiple uncertainties predominate.

Furthermore, educating people in values implies a social and school commitment to the values that are proposed. Posing justice, honesty and democracy as values to be taught implies that the school, the educator, and society itself take these values on board in practice and accepts them as part of their practical and spiritual routine.

It would not do much good to propose teaching these values in the school if the day-to-day practice of adults contradicted them. In other words, example is the most effective way of educating people about values: "the example comes from above", from parents, from educators, from politicians, from social and political institutions, from adults. Otherwise, the educational process will rest on a pedestal of hypocrisy and incoherence, on the message "do what I say, but don't do what I do". Experience teaches us that this approach does not work.

To sum up, commitment and coherence, together with respect for the student's freedom, are the prerequisites for an education which intends to promote values of justice, authenticity, cooperation and respect for the lives of others.

Taking these assumptions into consideration, the school can and should become once more an educative institution. In the curriculum reform currently under way, a concept of ethical and moral education is being developed which takes these assumptions into account, requiring the participation and involvement of all actors in the educational process: teachers, pupils, parents and the communities where the schools are located. The process recognises that the task of educating pupils in values cannot be the exclusive responsibility of specialised teachers, but is the task of the entire school community, and should be favoured in all school activities.

Technical Notes

Technical Note 1

Methodology for disaggregating the GDP

Introduction

Reliable, coherent and relevant regional statistics are a firm basis for policies intended to reduce economic and social disparities between the regions of Mozambique. Only through the use of relevant and coherent statistics is it possible to identify objectively the regions which need assistance and to measure disparities. Mozambique is developing its production of statistics in order to respond to the information requirements of a variety of users.

The basis of demands for information stems from the fact that Mozambique is undergoing a process of growth where a package of policies for non-polarised growth requires real knowledge of the specific nature of growth in each region through the production of regional macro-economic indicators, both of the national accounts and of other socio-economic indicators.

Regional economic statistics have an important role to play in the formulation, implementation and evaluation of regional policies, and their conjunctural or long term evolution, and in determining regional disparities. Such statistics thus form an indispensable summary framework which makes it possible to assess the impact of regional development policies, and to assess the human development dimension.

There is no tradition of regional statistics in Mozambique. But there has been an initial attempt to disaggregate the Gross Domestic Product (GDP) from the standpoint of Gross Value Added, as a measure of the economic activity of the productive units in the regions.

The current work intends to resume the methodology previously used to disaggregate the value of the 1999 Gross Domestic Product by provinces/regions, and to update the previous estimates (1996-1998), using the INE's National Accounts as the new basis.

General principles

The section explores the general principles to be used in disaggregating the GDP produced by the INE's Department of National Accounts by provinces/regions. Thus we start by defining the concept of regional territory, and then establish rules for the provincial/regional breakdown of the GDP.

In an initial approach, the regional/provincial accounts consist of the regionalised registration of operations concerning the flow of goods and services between the residents of a region/province, and make possible the construction of a series of macro-economic indicators that facilitate comparisons of structure and evolving analyses of different regions. Thus each region is treated as a specific economic entity.

However this undertaking involves some conceptual difficulties since the complete description of the economy of each region/province cannot be obtained with the same breadth or depth as a national economy, given the multiplicity of statistical restrictions on deeper knowledge of regional or provincial activities.

Like the national accounts, the regional accounts are governed by the principle of residency, according to which each economic or productive unit is allocated to a particular economic territory in relation to

which it has a centre of economic interest. Thus the application of the principle of residency, as a general principle, in the regional/provincial accounts by area of activity means that the Gross Value Added should be allocated where the production unit resides. In the case of households, since they are single-region institutional units, it is considered that their centre of economic interest is in the region where the majority of their activities take place, which corresponds to the region where they live, but not necessarily the region where they work.

Delimiting the regional economy rests on the functional perspective, that is, the technical-economic unit of reference is the establishment whose activity in the region where it is located it is intended to capture. Since the establishment is the unit which best represents regional activity, it is also here that one finds the greatest constraints on constructing an accounting system identical to that used for the national accounts, since the establishment, unlike the company, does not possess legal status, and has no autonomous accounting. This fact makes it difficult to individualise an important part of the flows supporting the production of regional accounts.

The value added method consists in calculating the production of each sector, or each production unit, establishing the difference between "value leaving" and "value entering", coming from other sectors, and hence not produced in the sector or unit. SCN93 defines Value Added in residual terms as "the difference between the value of production and the intermediate consumption".

There are several concrete concepts that portray the idea of production. The product can be calculated in "gross" or "net" terms, depending on whether it includes the production equivalent to the wear and tear or depreciation of the fixed capital. It can be estimated at "market prices" or at "factor cost", depending on whether or not it includes indirect taxes, excluding possible subsidies to production. The product may be "national" rather than "domestic" when one includes in the aggregate the income received by "residents" from abroad, and the income paid to "non-residents". Finally, it can be calculated at current prices, of the year to which the estimate refers, or at constant prices, of a particular year of reference, which makes it possible to measure real variations, or variations in the volume of production, since the possible effect of variation in price levels has been corrected.

The estimates we have made are of the Gross Domestic Product at market prices, both at constant (1996) prices, and at current prices of 1997, 1998 and 1999. Obviously we have included the estimates at current prices (equal to the constant prices) for the base year of 1996.

Sources of data

For this work, the authors used the balance sheets, the Provincial Statistical Yearbooks, the data from the Early Warning System, as well as the data from the General Population and Housing Census. These were accompanied by value judgements to provide estimates of production and of Value Added. Choosing this procedure is related to the lack of detailed information at provincial level, since the Provincial Statistical Yearbooks, although they have been gradually improving in quality over the years, still have data gaps in certain areas.

Thus for agricultural products, the annual data from the Early Warning System

provides information by province for seven major crops (unhusked rice, maize, sorghum, beans, fresh cassava, groundnuts and millet). Taken together, these account for about 75% of the total estimated value of agricultural production in 1996.

As for other products, for which there is no information broken down by provinces, the authors took the weighted average rate of production of the products in the Early Warning System, and, in some cases, the population growth rate, on the assumption that, when the market is saturated and there is no possibility of exports, production becomes stabilised at the size of the market, and its growth, in the case of perishable products, in the absence of other distorting factors, approaches the population growth rate.

For livestock produce, the data on the lists of livestock by province, and by category and species was used. This provides information on cattle, goats, pigs and other species.

For the fisheries sector, the allocation of production to provinces was based on the number of people employed by economic activity, in accordance with the some of the results from IAF 96/97, updated by the population growth rate.

For mining, the source of data was the Ministry of Mineral Resources, which possesses information broken down by provinces on quantities and prices of the main mineral products.

For manufacturing industry, the available data results from the INE's processing of the annual industrial surveys, on the information in the Provincial Statistical Yearbooks, and on the perception of the authors on the location of industrial production.

For electricity, the amount of energy invoiced by provinces, included in the EDM annual reports, was used. For piped water services, the reference data come from the water companies in each province. This information was complemented by the IAF data registering expenditure on water that is not piped. The value is updated annually by the population growth rate, with the assumption that the service bears a direct relation to the number of people who need these services.

For the trade sector, the authors created an index taking into account the number of vehicles, the number of hotel beds, and the number of telephone exchanges, and in this way the production was allocated to provinces.

For the financial sector, staff expenditure (ages and other staff expenditure) was used.

For the construction industry, the authors used the number of people employed by economic activity according to some results of IAF 96/97, and updated with the population growth rate.

For restaurants and hotels, production was allocated according to the guest-nights in hotel establishments, as registered in the Provincial Yearbooks. This criterion is more consistent with that used by the INE's department of national accounts in calculating quantitative indices for the sector.

The distribution of production in the transport and communications sector was based on an index combining statistics of the number of vehicles, cargo handled in the ports, and the capacity used in the telephone exchanges.

For the public administration, health and education sectors, the authors used the expenditure in the state budget, the hospital bed occupation rate, and the number of pupils enrolled.

Methods for disaggregating and regionalising the GDP

Methods for allocating the Gross Value Added to regions/provinces vary since they are determined by the type of data available and the organisation of the national statistical system. In general there are three methods of regionalisation:

- The Ascending Method which presupposes the collection and treatment of the elementary statistical units, taking into consideration local level units of economic activity (establishments) and institutional units (households and public administrations), and adding them together until reaching the desired regional level;

The Descending Method which consists of disaggregation of the national product on the basis of a regional indicator, resulting in the utilisation of apportioning units, i.e. if a global indicator of the approximate phenomenon we intend to measure is used. Hence, the national aggregate is distributed on the basis of an indicator that is approximate to the variable we intend to estimate. The method is known as descending because the aggregate is allocated to a region on the basis of a local or regional economic activity. However, the notion of local activity, in most cases, continues to require an accurate regional allocation. For example, Gross Value Added for the railway transportation can be allocated to regions according to the number of passengers and aggregate tonnage of cargo transported in a given period.

- The Mixed Method, which consists in using simultaneously the ascending and descending methods. For the ascending method is rarely found in its pure form. There are always gaps in the data which have to be filled by using the descending approach. Similarly, many descending methods frequently include data from exhaustive sources, as do ascending estimates. Thus mixed methods are the norm.
- However, the choice between ascending and descending methods depends above all on the statistical sources available.

Here, we shall use the descending method, where the main regional aggregate is a replica of the following aggregates in the national accounts: Production, Intermediate Consumption, Gross Value Added, and Gross Domestic Product (GDP), in the perspective that the output resulting from these estimates is the reflex of the National Accounts, compiled and published by the INE's Department of National Accounts.

One advantage of this method is the numerical consistency between the national and regional accounts. Such methods are cheaper to develop in that they make use of existing data, and they do not require new exhaustive records. This is the most recommended method in the situation where there is no information from local units of economic activity.

Based on these assumptions, an estimate was first made of the value of production of each of the sectors of activity based on a sample of 142 products regarded as representative of all economic activity,

To allocate the production by provinces, the reference point taken was the balance sheets for each year drawn up by the INE's Department of National Accounts for each of the 142 products, on the assumption that the sum of the production of all the provinces should be approximately equal to the value of the production on the balance sheets.

Decisions as to the criteria previously defined are strongly constrained by the

available data and its quality. In general, the use of indicators of gross production or of sales in order to allocate the Gross Value Added to regions, starts from the principle that the intermediate consumption corresponds to the same proportion of production in all regions.

Based on these criteria, the value of production by provinces was estimated for 1997, 1998 and 1999. Once the value of production was obtained, the coefficients of intermediate consumption by activity were applied, on the assumption that these coefficients are the same for all provinces. Finally, as SCN93 recommends, the Value Added was estimated in residual terms, by the difference between production and intermediate consumption.

Adjustment of the provincial/regional values to the national ones

In some cases, the sum of the regional/provincial figures was not exactly the same as the national total, which meant that the regional/provincial totals had to be adjusted. These are differences that result from chance errors, from the quality of the regional/provincial data, or from specific differences in the coverage or definition of the national total.

In an attempt to eliminate such differences, the authors made adjustments in proportion to the regional figures, so that the same percentage adjustment would be applied to all regions/provinces. Thus for 1999 the national data showed a difference of 1.2% less than the sum of the regional/provincial figures. In this case, the regional/provincial figures were adjusted by this percentage.

This same criteria was also used to share out the Customs Duties and the Indirectly Measured Financial Intermediation Services (SIFIM) to reach the GDP.

Quality and precision of the estimates

The quality and precision of the estimates presented here depends on the type of methodology applied, but above all on the quality of the data, a factor which is beyond our control, and necessarily involves improving the information in the Provincial Yearbooks, because they are based on smaller samples and on data bases of inferior quality.

The national economy has a strong identity: the national frontiers are fixed, and cross-border flows (of people, goods, services and financial assets) are habitually measured or are even regulated. The regional economy is much more open: the regional/provincial borders vary from time to time, and the flows between regions/provinces are rarely regulated or measured. Even so, based on the available data and the criteria we have defined, it has been possible to present an estimate which, from our point of view, seems to reflect what is really happening in the Mozambican economy.

Technical Note 2

Calculating the Human Development Index (HDI)

The HDI is based on three indicators: longevity, as measured by life expectancy at birth; educational attainment, as measured by a combination of adult literacy (two-thirds weight), and the combined gross primary, secondary and tertiary enrolment ratio (one third weight); and standard of living, as measured by real per capita GDP (PPP$).

Fixed minimum and maximum values

To construct the index, fixed minimum and maximum values have been established for each of these indicators:

- Life expectancy at birth: 25 years and 85 years.
- Adult literacy rate: 0% and 100%
- Combined gross enrolment ratio: 0% and 100%.
- Real GDP per capita (PPP$): $100 and $40,000.

For any component of the HDI, individual indices can be computed according to the general formula:

$$\text{Index} = \frac{\text{Actual } x_i \text{ value} - \text{minimum } x_i \text{ value}}{\text{Maximum } x_i \text{ value} - \text{minimum } x_i \text{ value}}$$

If, for example, the life expectancy at birth in a country is 65 years, the index of life expectancy for this country would be:

$$\text{Life expectancy index} = \frac{65 - 25}{85 - 25} = \frac{40}{60} = 0.667$$

Treatment of income

Constructing the income index is a little more complex. Over the years the Human Development Report has used a particular formula to do this, explained below. This year a thorough review of the treatment of income in the HDI was done, based on the work of Anand and Sen (1999).

Income enters into the HDI as a surrogate for all the dimensions of human development not reflected in a long and healthy life and in knowledge - in a nutshell it is a proxy for a decent standard of living. The basic approach in the treatment of income has been driven by the fact that achieving a respectable level of human development does not require unlimited income. To reflect this, income has always been discounted in calculating the HDI. The issue is, how should it be discounted, and at what level?

In previous years the practice was to discount income above the threshold level of the world average income, using the following formula:

$$\begin{aligned} W(y) &= y^* \text{ for } 0 < y < y^* \\ &= y^* + 2[(y - y^*)^{1/2}] \text{ for } y^* < y < 2y^* \\ &= y^* + 2(y^{*1/2}) + 3[(y - 2y^*)^{1/3}] \text{ for } 2y^* < y < 3y^* \end{aligned}$$

Where y is the actual per capita income in PPP$ and y* is the threshold per capita income (PPP$) at the world average income in the year for which the HDI is constructed. The world average income was taken as the threshold income on the premise that each person should have the income that the world on average enjoys.

To calculate the discounted value of the maximum income of $40,000 (PPP$), the following formula was used:

$$W(y) = y^* + 2(y^{*1/2}) + 3(y^{*1/3}) + 4(y^{*1/4}) + 5(y^{1/5}) + 6(y^{*1/6}) + 7[(40{,}000 - 6y^*)^{1/7}]$$

This is because $40,000 (PPP$) is between 6y* and 7y*. With the above formula, the discounted value of the maximum income of $40,000 (PPP$) is $6,311 (PPP$).

The main problem with this formula is that it discounts the income above the threshold level very heavily, penalising the countries in which income exceeds the

threshold level. It reduces the $34,000 (PPP$) between the threshold and maximum level of income to a mere $321 (PPP$). In many cases, income loses its relevance as a proxy for all dimensions of human development other than a long and healthy life and knowledge.

This year's refinement in the treatment of income attempts to rectify this problem by putting the methodology on a more solid analytical foundation. The rationale and the formula adopted in the refinement are discussed in detail in Anand and Sen (1999). To summarise, in the construction of this year's HDI, income is treated using the following formula:

$$W(y) = \frac{\log y - \log y_{min}}{\log y_{max} - \log y_{min}}$$

There are several advantages to this formula. First, it does not discount income as severely as the formula used earlier. Second, it discounts all income, not just the income above a certain level. Third, as figure TN1 shows, the asymptote starts quite late, so middle-income countries are not penalised unduly: moreover, as income rises further in these countries, they will continue to receive recognition for their increasing income as a potential means for further human development.

Illustration of the HDI methodology

The construction of the HDI is illustrated with three examples - an industrialised country, Germany, and two developing countries, China and Mozambique.

Country	Life expectancy (years)	Adult literacy (%)	Combined gross enrolment ratio (%)	Real GDP per capita (PPP$)
Germany	77.2	99.0	88.1	21,260
China	69.8	82.9	68.9	3,130
Mozambique	42.3	39.5	32.0	740

Life expectancy index

$$\text{Germany} = \frac{77.2 - 25}{85 - 25} = \frac{52.2}{60} = 0.870$$

$$\text{China} = \frac{69.8 - 25}{85 - 25} = \frac{44.8}{60} = 0.747$$

$$\text{Mozambique} = \frac{42.3 - 25}{85 - 25} = \frac{17.3}{60} = 0.288$$

Adult literacy index

$$\text{Germany} = \frac{99.0 - 0}{100 - 0} = \frac{99.0}{100} = 0.990$$

$$\text{China} = \frac{82.9 - 0}{100 - 0} = \frac{82.9}{100} = 0.829$$

$$\text{Mozambique} = \frac{39.5 - 0}{100 - 0} = \frac{39.5}{100} = 0.395$$

Combined gross enrolment index

$$\text{Germany} = \frac{88.1 - 0}{100 - 0} = \frac{88.1}{100} = 0.881$$

$$\text{China} = \frac{68.9 - 0}{100 - 0} = \frac{68.9}{100} = 0.689$$

$$\text{Mozambique} = \frac{32 - 0}{100 - 0} = \frac{32}{100} = 0.320$$

Educational attainment index

$$\text{Germany} = [2(0.990) + 1(0.881)]/3 = 0.954$$

$$\text{China} = [2(0.829) + 1(0.689)]/3 = 0.782$$

$$\text{Mozambique} = [2(0.395) + 1(0.320)]/3 = 0.370$$

Country	Life expectancy index	Educational attainment index	Adjusted real GDP (PPP$)	Sum of the 3 indices	HDI
Germany	0.870	0.954	0.895	2.719	0.906
China	0.747	0.782	0.575	2.104	0.701
Mozambique	0.288	0.370	0.334	0.992	0.331

Adjusted real GDP per capita (PPP$) index

$$\text{Germany} = \frac{\log(21{,}260) - \log(100)}{\log(40{,}000) - \log(100)} = 0.895$$

$$\text{China} = \frac{\log(3{,}130) - \log(100)}{\log(40{,}000) - \log(100)} = 0.575$$

$$\text{Mozambique} = \frac{\log(740) - \log(100)}{\log(40{,}000) - \log(100)} = 0.334$$

Human Development Index

The HDI is a simple average of the life expectancy index, educational attainment index and adjusted real GDP per capita (PPP$) index, and so is derived by dividing the sum of these three indices by 3.

References and Bibliography

ANDERSON, Benedict. Nação e consciência nacional. São Paulo, Ática, 1989

ASSIS, Abel (Coord.). Avaliação das capacidades dos alunos da 2a e 3a classes na cidade de Maputo, províncias de Maputo, Zambézia e Cabo Delgado. Maputo, INDE/PASSE, 1999 (mímeo)

BUENDÍA GÓMEZ, Miguel. Educação moçambicana: história de um processo. Maputo, Livraria Universitária, 2000

Cabral, J.A. 1975. Empréstimos linguísticos nas línguas moçambicanas. Empresa Moderna. Lourenço Marques.

COLARINHO, Marcos et al. A problemática de alfabetização em Moçambique. Maputo, INDE, Cadernos de Pesquisa (7), s/d

Comissão Nacional do Plano (1994). Metodologia de Estimação das Contas Nacionais. Maputo: Comissão Nacional do Plano/DNP.

CONCEIÇÃO, Rafael da & alii. Inserção da Escola na Comunidade: relatório das pesquisas antropológicas sobre a interacção entre a cultura tradicional e a escola oficial, realizadas nas províncias de Nampula, Manica e Inhambane. Departamento de Arqueologia e Antropologia, FL – UEM, 1998

DELORS, Jacques. Educação: um tesouro a descobrir. Relatório para a UNESCO da Comissão Internacional sobre a Educação para a século XXI. Porto, Asa, 1996

Democracia, cidadania e a escola. In: Mazula, B. (Editor). Moçambique: eleições, democracia e desenvolvimento. Maputo, 1995

DIAS, Patrik V. "Educação e desenvolvimento em África sub-Sariana – desajustamentos conceptuais e logros ideológicos". IN: Revista Internacional de Estudos Africanos. (12-13). Instituto de Investigação Científica Tropical – Centro de Estudos Africanos e Asiáticos, Janeiro-Fevereiro de 1990

Eurostat, (1995) Regional Accounts Methods – Gross Value Added and Gross Fixed Capital Formation by Activity. Luxemburg

Hedges, David cord. (1999) História de Moçambique: Moçambique no Auge do Colonialismo, 1930-1961. UEM. Livraria Universitária

INE (1998). II Recenseamento Geral da População 1997 – Resultados definitivos. Maputo, Moçambique.

INE, 1999. II Recenseamento Geral da População e Habitação. Resultados definitivos.

INE, Projecções Anuais da População por Província e Área de Residência, 1997-210. Série Estudos Nº 2. Maputo, Moçambique

INE. Anuários Estatísticos Provinciais de 1996-1999. Maputo: INE.

INE. Mapa de Equilíbrios 1996-1999. [Ficheiros Electronicos]. Maputo: INE.

Instituto Nacional de Estatística, "Anuário Estatístico" (vários). Maputo: INE.

JOHNSTON, Anton. Study, produce and combat!: education and the mozambican state, 1962-1984. Estocolmo, Institute of International Education, University of Stockholm, 1986

Katupha, J.M. 1998. O Panorama linguístico de Moçambique e a sua contribuição na definição de uma política linguística apropriada. Lua Nova 1: 27-32.

KHÔI, Lê Thân. "Educação, cultura e desenvolvimento em África". Revista Internacional de Estudos Africanos. (12-13). Instituto de Investigação Científica Tropical – Centro de Estudos Africanos e Asiáticos, Janeiro-Fevereiro de 1990

KHÔI, Lê Thân. "Educação, cultura e desenvolvimento em África". Revista Internacional de Estudos Africanos. (12-13). Instituto de Investigação Científica Tropical – Centro de Estudos Africanos e Asiáticos, Janeiro-Fevereiro de 1990

Krugman, Paul R. e Maurice Obstfeld (1994). International Economics: Theory and Policy. Third Edition. New York: Harper Collins.

Lazo, António (1998) Procedimentos Métodológicos na Elaboração das Contas Nacionais de Moçambique.

Marinis, H. 1981 Línguas Bantu : sua história e sua classificação, Ms. NELIMO.

MARTINS, Zeferino. Aproveitamento escolar no Sistema Nacional de Educação: contribuição para um estudo das disparidades regionais e de sexo com referência para o EP1. Maputo, INDE, Cadernos de Pesquisa (1), 1992

MAYOR, Federico. Discurso de abertura da 45a. sessão da Conferência Internacional da Educação. Genebra, 2 de Outubro, 1996, (mímeo).

MESCT (2000) Plano Estratégico do Ensino Superior em Moçambique para o Período 2000-2010: Análise do Sistema Actual do Ensino Superior em Moçambique. Maputo

MINED. Balanço da introdução do SNE. Maputo, DNP/MINED, 1989, mímeo

MISAU-MPF-INE-UEM (2000) Impacto Demográfico do HIV/SIDA em Moçambique

MONDLANE, Eduardo. Lutar por Moçambique. Lisboa, Sá da Costa, 1977

Ngunga A. Breves notas sobre as línguas moçambicanas. In Notícias: 28/2/92:4. Maputo.

Ngunga, A. 1985 O papel das línguas nas instituições de aprendizagem em Moçambique. Apresentada no Sub-regional sobre línguas locais. Lusaka, Zâmbia.

Ngunga, A. 1986. As línguas bantu de Moçambique. Limani : linguística e literatura, 2:59-

Ngunga, A. 1991. As línguas bantu de Moçambique nos meios de comunicação social. In Domingo de 24/2/91 e 3/3/91

PALME, Mikael. O significado da escola: repetência e desistência na escola primária moçambicana. Maputo, Cadernos de Pesquisa (2), 1992

Plano Estratégico da Educação, 1999-2003: Combater a Exclusão, Renovar a Escola. Maputo, 1999

PNUD (1999). Relatório Nacional do Desenvolvimento Humano. PNUD-UEM-SARDC

REIS, João & MUIUANE, Armando P. (org) Datas e documentos da História da Frelimo. 2. ed. Maputo, Imprensa Nacional, 1975

REIS, João & MUIUANE, Armando P. (org) Datas e documentos da História da Frelimo. 2. ed. Maputo, Imprensa Nacional, 1975

Relatório da Segunda Reunião Anual de Revisão do Plano Estratégico da Educação. Maio de 2000

REPÚBLICA POPULAR DE MOÇAMBIQUE (RPM). Sistema Nacional de Educação: Linhas Gerais e Lei 4/83. Maputo, 1985

Sen, Amartya (1999) Development as Freedom. Oxford University Press. United Kingdom

Simbine, G. Xironga no Governo de Maputo-cidade. In Notícias 14/11/2000:2. Maputo

STROUD, Christopher & TUZINE, António. Uso das línguas africanas no ensino: problemas e perspectivas. Maputo, INDE, Cadernos de Pesquisa (26), 1998
UNDP (1990) Human Development Report. Oxford University Press. United Kingdom
UNDP (1991) Human Development Report. Oxford University Press. United Kingdom
UNDP (1992) Human Development Report. Oxford University Press. United Kingdom
UNDP (1993) Human Development Report. Oxford University Press. United Kingdom
UNDP (1994) Human Development Report. Oxford University Press. United Kingdom
UNDP (1995) Human Development Report. Oxford University Press. United Kingdom
UNDP (1996) Human Development Report. Oxford University Press. United Kingdom
UNDP (1999) Human Development Report. Oxford University Press. United Kingdom
UNDP (2000) Human Development Report. Oxford University Press. United Kingdom
UNESCO, Oportunidades perdidas – Cuando la escuela no cumple su misión, 1998
Universidade Eduardo Mondlane. Maputo
VELOSO, Maria Joana & GOMES, Teresa Santa Clara (Orgs.). Desenvolvimento: dúvidas e esperanças (Textos recolhidos na Cimeira Mundial sobre Desenvolvimento Social e no Fórum Internacional das ONG – Copenhaga, Março, 1995). Lisboa, Plataforma Portuguesa das ONGD, 1995
VELOSO, Maria Joana & GOMES, Teresa Santa Clara (Orgs.). Desenvolvimento: dúvidas e esperanças (Textos recolhidos na Cimeira Mundial sobre Desenvolvimento Social e no
Fórum Internacional das ONG – Copenhaga, Março, 1995). Lisboa, Plataforma Portuguesa das ONGD, 1995
World Bank (2000) Vital Statatiscs. World Bank's Mozambique Resident Mission. October 2000
Yai O.B. 1983. Elements for a Policy for Promotion of National Languages, UNESCO.

Statistical Annex