

# **Investing in People, Developing a Country**

*HIGHER EDUCATION  
FOR DEVELOPMENT IN NAMIBIA*

*MINISTRY OF HIGHER EDUCATION,  
VOCATIONAL TRAINING,  
SCIENCE AND TECHNOLOGY  
6 MAY 1998*



Ministry of  
Higher Education,  
Vocational Training,  
Science and Technology

**GAMSBURG MACMILLAN**



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**ABBREVIATIONS**

BETD	Basic Education Teacher Diploma
CES	Centre for External Studies, University of Namibia
COST	College for Out of School Training
DEC	Distance Education Centre, Polytechnic of Namibia
IGCSE	International General Certificate of Secondary Education
HIGCSE	Higher International General Certificate of Secondary Education
MBEC	Ministry of Basic Education and Culture
MHEVTST	Ministry of Higher Education, Vocational Training, Science and Technology
NACTEN	National Accreditation Council on Teacher Education in Namibia
NAMCOL	Namibian College of Open Learning
NATCOM	Namibia National Commission for UNESCO
NCSTRD	National Council for Science and Technology, Research and Development
NIED	National Institute for Educational Development
NQA	Namibia Qualifications Authority
NTTD	Needs, Technology, Training and Development Programme
SADC	Southern African Development Community
UNAM	University of Namibia
UNESCO	United Nations Educational, Scientific and Cultural Organisation

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Nahas Angula  
Minister of Higher Education, Vocational Training, Science and Technology

## **FOREWORD**

Higher Education in Namibia is nascent. It is at a budding stage. Its form and content require nurturing and cultivation. This policy document is aimed at providing guidelines and benchmarks for the development of higher education in this country.

The document is necessary for a number of practical reasons. These include the issues of relevance, cost and affordability, to mention just a few.

The issue of relevance is important in higher education development, especially in an emerging nation like Namibia. Higher education in a developing country should reflect the needs of the society in which it is rooted. Higher education in Namibia should, therefore, reflect the cultural, political, economic, social and spiritual needs of the nation. Some guidelines are provided in the body of this document on how higher education institutions and programmes should address the national needs, requirements and challenges.

The development of higher education has a price tag. In a country with a small population like Namibia it is imperative that priorities be defined in higher education in order to develop institutions and programmes which are of cost benefit to the nation and affordable to beneficiaries. The risk is great that the nation may spend a large proportion of its resources on the few higher education institutions to the exclusion of the majority. By definition higher education is selective and therefore exclusive. This document has attempted to reflect on these issues in order to sensitise and guide stakeholders in this sector.

The document is sensitive to the autonomy of higher education institutions and programmes. It is, therefore, not prescriptive; it is rather suggestive. The document, however, reflects the collective will of the majority of stakeholders in higher education.

The process followed in developing this higher education policy guidelines attest to this fact. This policy guideline on higher education development in Namibia was approved by the Cabinet of the Government of Namibia by Decision No: 14<sup>th</sup>/16.06.98/006 during its 14th meeting in 1998. Subsequently the document was tabled in the National Assembly and adopted on 22 September 1998. The policy document, therefore, enjoys both the political and popular support of the majority. Stakeholders in higher

education are urged to follow its guidelines in order for the country to develop an orderly, relevant, affordable and sustainable higher education system.



Nahas Angula  
Minister of Higher Education, Vocational Training, Science and Technology  
29 September 1999

## **A NOTE ON PROCESS**

### **THE TASK**

To establish and maintain effective and efficient educational services, achieve economic and social development and organise a productive Public Service, human resource development must be addressed as a matter of priority in Namibia. In the context of national development goals specified in the Namibian Constitution and the First National Development Plan, and in view of the paramount importance of human resource development, a new portfolio, namely Higher Education, Vocational Training, Science and Technology, was created within the Government of Namibia. Among the many tasks of this portfolio is overseeing the development of the higher education system as an engine of human resource development.

The development of the higher education system must be responsive to the needs for human resources in our society as it draws on public funding to create, maintain and sometimes eliminate programmes within the institutions of higher learning. To promote the development of the higher education system there is a need for a public policy guide: a higher education policy frame in the form of a White Paper on Higher Education.

To be useful, policy statements must result from a consultative and participatory process in which those responsible for the policy and those affected by the policy have opportunities to express their concerns, propose analytic perspectives and courses of action, and criticise and respond to others' contributions. Policy consultations are often unruly and lengthy. Without them, however, policy statements are likely to remain just that, official documents to which people occasionally refer but which may have little impact on day-to-day behaviour.

This White Paper on Higher Education has therefore been developed through a series of consultations and successive drafts.

### **STARTING POINTS**

To guide the preparation of the White Paper on Higher Education, the Minister of Higher Education, Vocational Training, Science and Technology outlined a set of expectations for the work to be done.

Building on the Report of the Presidential Commission on Higher Education (1991) and numerous other reports on the University of Namibia, the Polytechnic of Namibia and the colleges of education, and in consulta-

tion with the various stakeholders, the preparation of the White Paper should

- (1) review the current state of higher education in Namibia, with particular attention to -
  - (a) the funding arrangements of higher education institutions;
  - (b) the programmatic and other links among the institutions of higher learning; and
  - (c) the appropriate and feasible institutional location(s) of higher education programmes, including the circumstances in which it may be preferable for Namibians to enroll in programmes offered outside the country; and
- (2) draw on the contributions of higher education officials and others in the education community to develop a policy frame for higher education in the form of a White Paper on Higher Education that embodies the nation's aspirations, that supports the goals of access, equity, quality and democracy, that is sensitive to public expectations, available resources and the importance of efficient operations, and that emphasises high priority educational outcomes.

Several documents, including the Constitution of Namibia, provide statements of direction for developing national higher education policy. Each has signalled a stage in the consultative and policy development process. Those documents include:

*Higher Education in Namibia: Report of a Presidential Commission* (1991) reviewed and analysed higher education and offered recommendations to guide the transition from the clearly inadequate inherited system to a new mission, institutional configuration and working arrangements.

*Toward Education For All* (1993), a White Paper developed by the Ministry of Education and Culture and approved by Parliament, set out general policies and priorities for our education system.

The first National Development Plan (NDP1, 1995) addressed Namibia's human resource development needs, noting that "As an integral part of formal education, higher education is an active contributor to human resources development."

Since the creation of the new ministry responsible for higher education, several documents have outlined the problems to be addressed and the directions of policy.

In 1995, the Ministry of Higher Education, Vocational Training, Science and Technology published its *Mission Statement and Investment Plan* under the motto "Investing in People to Provide Hope and Faith in the Future". In that same year, the Minister responsible for higher education reviewed accomplishments and expectations in an address to the annual meeting of the Namibian Educational Management and Administration Society: *Development of Tertiary Education in Namibia and Future Prospects*. In subsequent papers and presentations the Minister has clarified objectives and priorities, including *Higher Education Development in Namibia: The Cutting Edge in Nation Building*, presented to the National Colloquium on Higher Education Policy Development in Namibia in September 1997. A list of the documents reviewed for the preparation of this policy statement is included in Documents and References at the end of this White Paper.

## THE CHALLENGE

Developing a White Paper for Higher Education is a demanding challenge, in part because it requires considering several different questions simultaneously. It must address what is, what ought to be, and how to get there. To do that, it must also explore what is problematic in the current situation and how to resolve, or work toward resolving, those problems.

Clearly, there are important disagreements within the higher education community and indeed in the larger society about the appropriate objectives and institutional arrangements for higher education. A further challenge in preparing this White Paper is to find discussion forums and meeting grounds where contested issues can be debated and illuminated, if not resolved. In that way, the preparation process itself can help to forge a consensus on major policy directions and priorities.

## THE PROCESS

One major starting point, then, has been the report of the 1991 Presidential Commission on Higher Education, *Higher Education in Namibia: Report of a Presidential Commission*, which provides a baseline for assessing the current situation, a review of the elements of the higher education system at that time and recommendations for change. Some of those recommendations have been adopted, while others have not. Many are reflected in the descriptions and mission statements of the higher education institutions as they operate today.

This White Paper should not, however, be understood as a revision or extension of that Presidential Commission Report. Rather, the concern of the White Paper is to note progress, identify problems, specify priorities and chart directions. The comments and suggestions here are not those of external expert observers, but rather the aspirations, expectations, sometimes frustrations, and commitments of the Namibian education community itself.

In October 1996, officials of the Ministry of Higher Education, Vocational Training, Science and Technology and of its major institutions set the general parameters for this White Paper. Subsequently, many of them prepared text for inclusion. Those submissions and related documents became the core of a preliminary discussion draft of the White Paper, completed on 24 April 1997, which was widely circulated for comment.

In June 1997, that preliminary discussion draft provided the foundation for further discussions and workshops with those officials and with others in the education community. In addition to the Ministry of Higher Education, Vocational Training, Science and Technology, those consultations included heads and senior staff from the major higher education institutions and senior officials of the Ministry of Basic Education and Culture, as well as representatives of students, teachers and private higher education institutions. Most provided written submissions, either during the course of the June discussions or subsequently.

Those discussions and suggested revisions then informed the preparation of a revised draft White Paper, completed on 5 September 1997. That draft was in turn circulated widely for comment and served as the base document for the National Colloquium on Higher Education Policy Development: Capacity 2000 Plus, held in Windhoek from 17 to 20 September 1997.

Opened by the President and by the Minister of Higher Education, Vocational Training, Science and Technology, and closed by the Prime Minister, that colloquium permitted its nearly 200 participants to explore major concerns, priorities and directions in higher education policy. Representatives of Namibia's higher education institutions met with colleagues involved in education at other levels, students, teachers, the private sector and external funding and technical assistance agency officials to discuss a very wide range of issues and development paths for higher education. The strong representation from higher education communities across southern and eastern Africa facilitated examining initiatives and programmes elsewhere - both successful and unsuccessful - and considering their rel-

evance for Namibia. Discussions during the National Colloquium highlighted common interests, shared objectives and points of disagreement. While some of those disagreements were resolved during the National Colloquium, others will require continuing deliberations in appropriate forums.

Following the National Colloquium, the higher education community was again invited to suggest revisions to the draft White Paper and to submit additional text for inclusion. Reflecting the strongly held views on higher education, the response to that renewed invitation was substantial. As well, maintaining the pattern established for the earlier drafts, focused discussions on the White Paper were held at the major higher education institutions, including two of the colleges of education, the Polytechnic of Namibia and the University of Namibia, as well as at both education ministries and two other ministries and at the National Institute for Education Development.

*There remain important differences of opinion about directions and priorities in higher education in Namibia. That is as it should be in a democratic country. Building on the inclusive preparation process, the White Paper provides a policy frame for addressing those divergent views and new disagreements that will surely arise in the future.*

In sum, this White Paper has been developed through a series of consultations that have provided several opportunities for engaging the major issues and for helping to shape the content, emphases and organisation of the White Paper. While some people may ultimately find themselves in disagreement with elements of the White Paper on Higher Education, it is essential that all of the constituencies of the education community in Namibia have opportunities to contribute to its preparation. It is essential as well that the preparation process be clear and visible to all involved. The goal of that approach to the development of the White Paper, of course, was not endless discussions but rather multiple opportunities for people from different settings with different ideas to make their voices heard. The guiding assumption for those consultations was that the process of preparing the White Paper is as important as its final text.

*The White Paper on Higher Education is, after all, about learning. Learning is not an end point, but a process. Just as we become more knowledgeable and develop new skills as individuals, so must we learn as a society. Not only students in their classrooms but all of us in Namibia must be learners throughout our lives. Our development depends on it.*

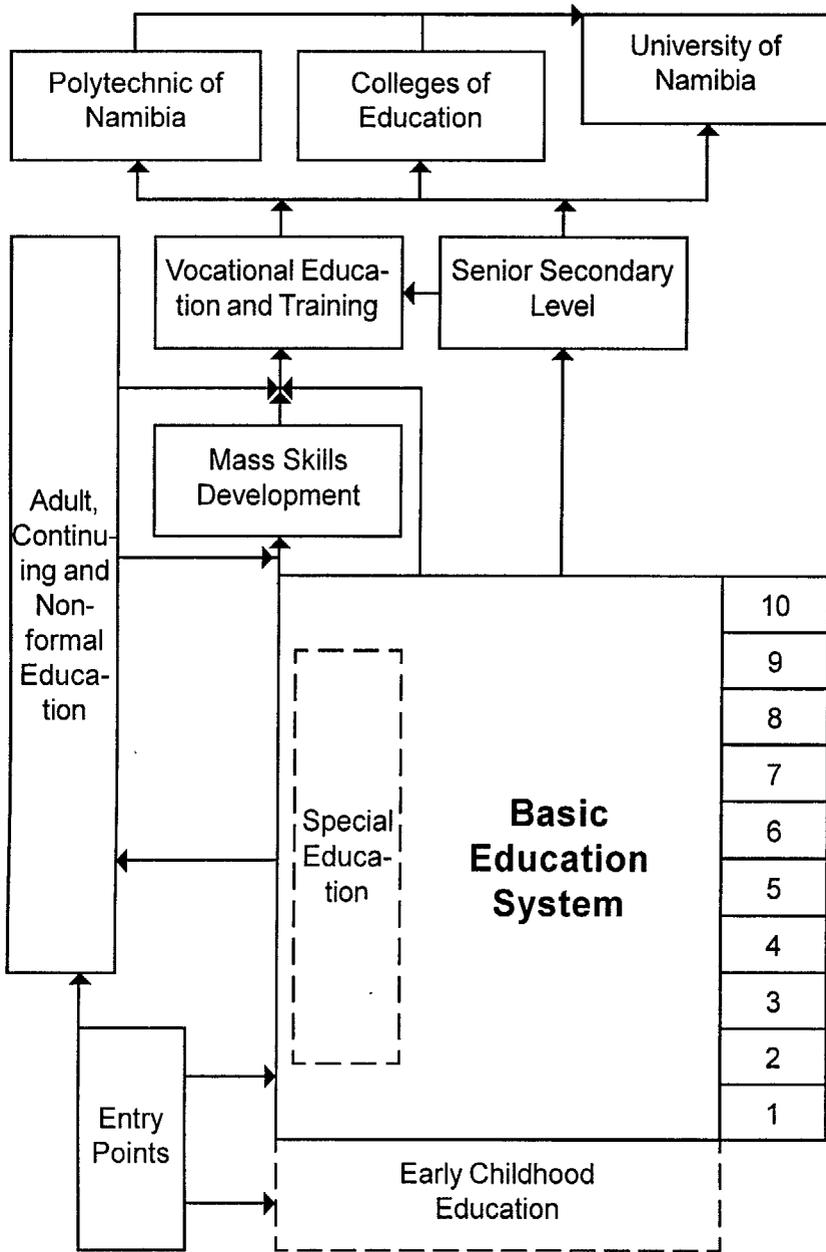


Figure A: Namibia's Education System

## Higher Education in Namibia

## **DEVELOPMENT DEPENDS ON PEOPLE**

Development depends on people. The initial years of our independence have been characterised by a remarkable spirit of personal commitment, national reconciliation and energetic activity across the country. While they are essential, good will and hard work are not sufficient. Development also requires knowledge and skills.

Having inherited a woefully inadequate education system that served far too little of our population and that generally segregated those it did serve, we have made major strides toward providing education for all Namibians. Still, we find ourselves unable to meet the demand for skilled people at the same time that we experience high unemployment and underemployment.

As our National Development Plan and numerous studies have pointed out, there is a shortage of skilled, experienced and educated human resources at all levels of employment in Namibia. One consequence is that we continue to rely heavily on expatriates imported at great cost. Simultaneously, some two fifths of our estimated labour force are unemployed. The vast majority of those who cannot find regular jobs lack employable skills, education and experience.

We also lack secondary school teachers in particular subjects, especially Mathematics and Science. Since the development of our human resources depends on an effective and adequately staffed education system, the shortage of well-prepared teachers and their uneven distribution across the country are major obstacles for our broad development agenda.

The demand for educated, trained and experienced human resources will have increased dramatically by the end of the century, extending even further the gap between employable and unemployable Namibians unless all partners - Government, public sector, private sector and especially all education and training institutions - join hands to accelerate the process of human resource development.

Developing our human resources - improving our education in its broadest sense - is the foundation for achieving all of the national goals we set. To understand better the special role for higher education, let us consider briefly our progress to date and the challenges we face.

## **CONTEXT**

Having integrated the multiple, racially differentiated departments responsible for education into a single education ministry, several years ago

we reviewed the progress we had made and the problems we faced. Extensive discussions and consultations led to our initial White Paper on education, *Toward Education For All* (1993), which included goals, objectives and priorities for our education system, along with more detailed discussions of its major elements.

*Toward Education For All* was primarily concerned with basic education, indeed our highest priority at independence. We have made striking progress toward enabling all young Namibians to find places in school and to complete their basic education. We have also developed both formal and non-formal education programmes for Namibians who were unable to go to school or whose schooling was disrupted. Our dramatic achievements in expanding access have been accompanied by a far-reaching effort to reform the content and approaches of basic education, especially through imaginative reforms of our teacher education system. We are confident these efforts will continue.

In the early 1990s our higher education system was just beginning its transition from the legacies of its apartheid era predecessors. While a Presidential Commission on Higher Education had undertaken an extensive analysis and had made a series of recommendations, major decisions about directions and forms for higher education in Namibia were still being considered and enabling legislation for our higher education institutions had not yet been adopted. Hence, it is essential to update and extend the framework for higher education development outlined in *Toward Education For All*.

The First National Development Plan (NDP1) specifies broad development objectives: reviving and sustaining economic growth; creating employment; reducing inequities in income distribution; and eradicating poverty. Among the quantitative targets specified in NDP1 is to increase full-time tertiary enrolment to at least 11 000 by the year 2000. That represents an increase of nearly 30% over the final two years of this century.

Within education and training, the Government's highest priorities during the First National Development Plan will be to maintain education's share in public expenditure and seek additional private participation and resources; ensure universal access to primary education and work towards basic education for all; reallocate expenditure to reduce inequalities among regions; provide and extend vocational training in areas of labour market demand; promote skills development for wage labour, self-employed and unemployed; develop higher education related to the human resource needs of the economy; and further cost recovery in tertiary education.

The Ministry of Higher Education, Vocational Training, Science and Technology aims to provide hope and instill faith in the future for the youth and citizens of Namibia through -

- strengthening the capacity of the senior secondary level to deliver quality and differentiated programmes;
- developing an integrated and comprehensive vocational, training and career education system;
- enhancing the national human resource capacity;
- harnessing science and technology in the service of rural and community development, improvement of quality of life, job creation and small-scale industry development;
- coordinating the planning and development of a higher education system relevant to the needs of Namibia and individual students;
- preparing the teachers and teacher educators required to achieve education for all Namibians and to improve the quality of education throughout the country; and
- promoting the national research and development capacity.

Within that sectoral goal, coordinating the planning and development of a higher education system relevant to the needs of Namibia and individual students has several major components:

- Working with the Ministry of Basic Education and Culture to strengthen the senior secondary level to prepare young adults who are capable of facing the challenges of higher education by developing a strong teacher education programme for senior secondary level teachers, in collaboration with the Faculty of Education and other faculties at the University of Namibia (UNAM), and developing differentiated programmes at the senior secondary level aimed at identifying national Senior Secondary Schools for Science and Mathematics, Art and Culture, Sports, Agriculture, Technical Education, Commerce and the like that will be designated schools of excellence and that will recruit promising students from across the country.
- Working with the colleges of education, the Ministry of Basic Education and Culture, the UNAM Faculty of Education and other higher education institutions to support and strengthen teacher education and thereby contribute to enabling Namibia's teachers to improve their skills, upgrade their qualifications and raise the quality of education in our schools.
- Facilitating the development of all our higher education institutions and their special roles, including the colleges of education (teacher educa-

tion), the University of Namibia (academic education) and the Polytechnic of Namibia (technological training and career education).

- Promoting cooperation and coordination among Namibia's higher education institutions and the development of higher education in general.
- Facilitating regional and international linkages among higher education institutions.

Our higher education students are an investment in our future. Though relatively few in number, they have a broad social responsibility. Even as we create an educated elite, we must work diligently to avoid entrenching elitism. Hence, we shall have to address tensions between societal priorities and individual preferences. And we shall have to do so in ways that permit and encourage broad participation in our discussions of higher education's goals, objectives and practices.

### **LIMITING LEGACIES**

We came to our independence with three very different paths to education beyond secondary school. Some of our young people continued their education in the institutions of other countries, both within the region and in more distant settings. Of those, many studied by correspondence, while others were obliged to spend years outside the country. Some of our young people studied at institutions in neighbouring countries created to address Namibian needs, for example, the United Nations Institute for Namibia in Lusaka. Within the country, the Academy for Tertiary Education combined a nascent university with a Technikon and a College for Out of School Training (COST). The Windhoek College of Education, created to prepare teachers for the white community, functioned well below capacity. Black teacher training colleges had much more limited resources and were inadequate to meet the needs of our population.

None of these paths served independent Namibia adequately. Although we shall have to continue to send some students abroad, we cannot rely entirely on others, however well meaning, to determine the appropriate courses of study or selection and promotion procedures. Nor can we expect others to respond directly and promptly to our needs, now and in the future. The legacy of racially segregated higher education is equally unsuited to provide our higher education today.

As in other parts of the education system, a major immediate task is to reduce the inequalities of the past by assisting those whose race, income,

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area of origin, language group and gender limited their opportunities to proceed beyond primary school.

Our challenge, therefore, has been to reconstruct the structure and ethos of our education system. We must take what is useful from this heritage and shape it into a new institutional arrangement designed to suit our current circumstances and our aspirations. These are weighty matters with major cost implications. As the fundamental issues have become clearer, we have made several major decisions about the form and functions of higher education. In other areas, we are exploring our alternatives.

This White Paper is a part of that reconstruction effort. Developing the White Paper has required us to explore expectations and practices, needs and interests, accomplishments and frustrations. Like the process of its preparation, this White Paper provides a framework for our deliberations and decisions. In this chapter, we are concerned with the background and context for developing higher education in Namibia. We shall return in subsequent chapters to many of the major issues and institutions introduced here.

### **POST-SECONDARY EDUCATION**

The Namibian education system is comparatively small. Our students number about 555 000, of whom 480 000 are in general education, 65 000 in non-formal and continuing education and 10 000 in tertiary institutions.

Tertiary institutions are those that provide post-secondary education programmes. They include vocational training centres, colleges of education, colleges of agriculture, the Polytechnic of Namibia and the University of Namibia. Private institutions also offer post-secondary education.

Tertiary institutions bear responsibility for national capacity building through human resource development. For tertiary education to fully meet national human resource requirements it must receive students who are well prepared, highly motivated and goal directed. Hence, effective tertiary education requires a diversified, focused and well-managed senior secondary system.

Notwithstanding significant progress since our independence, tertiary education in Namibia remains underdeveloped and in some respects misdirected. Historically the job reservation laws imposed on our country excluded the majority from holding responsible positions in government or in the private sector. Hence, there was no need for a comprehensive programme of high-level human resource development. The privileged minority had

access to institutions of learning in South Africa. Tertiary education programmes developed within Namibia were mainly targeted to winning the hearts and minds of blacks who aspired to join the middle class within a neo-colonial arrangement. Those programmes no longer serve our needs. For example, enrolment in colleges of education in 1995 was 1 866, with an output of 423 teachers, while annually we need about more than twice that number. Generally supply-driven rather than need-driven or demand-driven, other programmes in our higher education institutions also seem out of touch with current realities. There is, therefore, an urgent need to synchronise tertiary education programmes with the rest of the education system and with the development needs of our country.

The past six years have seen significant institutional reorganisation in higher education. The Academy for Tertiary Education was succeeded by the University of Namibia (Act No. 18 of 1992) and the Polytechnic of Namibia (Act No. 33 of 1994), an amalgamation of Technikon Namibia and the College for Out of School Training (COST).

Established in March 1995, the new Ministry of Higher Education, Vocational Training, Science and Technology (MHEVTST) was charged to give focus to the development of higher education, stimulate vocational training as a vehicle for socio-economic development and enhance science and technology for community empowerment, wealth creation and poverty reduction.

The Ministry of Higher Education, Vocational Training, Science and Technology has four major responsibilities: higher education; vocational skills development, technical education and training and technological education; research, science and technology; and human resources development more broadly. Higher education - the focus of this White Paper - includes all of post-basic education, specifically, higher secondary education, the colleges of education, the Polytechnic of Namibia and the University of Namibia. MHEVTST anticipates preparing separate White Papers specifying policies, objectives and priorities for vocational skills development, technical education and training, and technological education and for research, science and technology.

Intended to focus efforts and facilitate management, the division of responsibilities for education among several ministries is not always comfortable and should regularly be reviewed and periodically modified. The colleges of agriculture, for example, are being integrated into the University of Namibia. One example of potentially problematic divided responsi-

bilities concerns senior secondary school. Currently, MHEVTST is responsible for the final two years of secondary schools. That arrangement facilitates identifying promising students for higher education institutions, co-ordinating senior secondary instruction with higher education admission requirements and maintaining a bridge between the schools and higher education institutions. At the same time, that arrangement requires many secondary schools to report to two different ministries and may create confused lines of authority, contradictory statements of objectives and inconsistent patterns of accountability.

While Namibia has two ministries directly responsible for education, they share common goals - access, equity, quality and democracy - and common themes - education as a human right, education for empowerment and education for human resource development. In terms of programmes, education and training should be seen as a continuous and open system, with flexible entry and exit points.

Thus, in terms of programme development the initiatives of the two ministries should be understood as complementary and mutually reinforcing. Programmes in higher education must thus build on those developed for basic education and culture.

### **AIMS AND FUNCTIONS OF HIGHER EDUCATION**

Education and training must be understood as an investment in development. In particular, higher education has great potential for national capacity building that reaches far beyond the education sector.

Higher education's critical role in socio-economic development has been widely recognised. As a recent study points out,

universities play a more important national role in Africa than in other regions. ... They are the only national institutions with the skills, the equipment and the mandate to generate new knowledge through research. The level of skills concentration in African universities is higher relative to the rest of society than anywhere else in the world. ... University roles in research, evaluation, information transfer and technology development are therefore critical to social progress and economic growth. In short, African universities can and should be key actors in national development. [*Revitalizing Universities in Africa*, p. 2]

Higher education actively contributes to human resources development and thereby to national development more generally. That occurs directly, through the education of high-level human resources, for example engineers,

doctors, economists, agronomists and researchers. That direct contribution is also reflected in research on issues of special importance to our country and in seminars, colloquia and workshops organised to link the creation and application of knowledge to societal needs and public policies.

Higher education's contributions to human resources development are also indirect. Higher education institutions prepare not only teachers and chemists, but also teacher educators and professors of chemistry and their teachers as well. All education is concerned with learning. Higher education is also concerned with how we learn and with developing the skills and skilled people who help us learn.

Conscious of the long neglect of Namibian culture and history, higher education must serve as a crucible for cultural renewal and revitalisation.

More broadly, higher education promotes discovery, innovation and the promotion of new ideas, which bring about higher productivity and improvements in the living standards of all people. Higher education also produces and nurtures critical voices in society.

As it seeks to contribute to national development, higher education must find ways to combine attention to basic research and institutional autonomy on the one hand and applied research and responsibility to the nation on the other. Two recent observations on African higher education pose the dilemma sharply:

Africa, like any other continent, needs institutions for "unapplied" teaching, learning, reflection and research. This is particularly so because of the powerful and intensifying imbalance in the production and application of knowledge that exists between Africa and the North, and the corresponding sense of technological, intellectual and cultural dependence that can only be addressed if the continent has the facilities and the incentives to encourage her best thinkers to design appropriate paths. The conduct of basic research and the opportunity for original thought are in the last resort the only means by which societies can take control of their destiny. Such a function is not a luxury that can be dispensed with for a period, pending better economic times, but an integral part of the development process itself. [Court, *The Landscape of External Support to the Social Science and Humanities in Africa*, p. 3]

In our single-minded pursuit to create centres of learning and research of international standing, we had nurtured researchers and educators who had little capacity to work in surrounding communities but who could move to any institution in any industrialised country, and serve any privileged community around the globe with comparative ease. In our failure to contextualise

standards and excellence to the needs of our own people, to ground the very process and agenda of learning and research in our conditions, we ended up creating an intelligentsia with little stamina for the very process of development whose vanguard we claimed to be. Like birds who cross oceans when the weather turns adverse, we had little depth and grounding, but maximum reach and mobility. So that, when the going got rough, we got going - across borders. Faced with a growing brain drain, some African governments turned to the stick, to outright coercion; others, with much prodding by international donors, turned to the carrot, simultaneously trimming universities while upping the privileges of those who had survived the process. But none questioned the very nature of the institutions we had created and sustained. [Mamdani, *University Crisis and Reform: A Reflection on the African Experience*, p. 15]

Namibian higher education faces several challenges as the century draws to a close. First, since we have a small population in a large country, higher education needs a very broad reach. It must address national interests and serve several different constituencies. At the same time, as it seeks to do many things in many ways, higher education cannot afford duplicate, or sometimes even overlapping, initiatives.

Second, Namibia has committed itself to developing multiple paths to and through higher education. In particular, we have established an applied and career-oriented path that is parallel to the primarily academic track at a time when most other countries are moving toward a single higher education path that subordinates all other institutions to the university.

Third, Namibia seeks to fashion a mix of central direction and control and an openness to innovation and diversity in the development of higher education. To date the government has been essentially the sole provider of higher education, and its central role in that regard is likely to continue for some time to come. At the same time, national policy increasingly supports a liberal or market orientation that encourages diversity of types, modes and means of education. The number of private higher education institutions, both within Namibia and across our region, is likely to expand.

Fourth, as the ministry responsible for higher education, MHEVTST often plays an indirect leadership role. For the majority of our education system, the Ministry of Basic Education and Culture directly opens, controls and manages the schools. Many people expect MHEVTST to function in a similar way, to govern its domain with a firm voice and explicit instructions. In higher education, however, we attach a high value to the independence and self-governance of our institutions and accord them great

latitude in deciding on programmes, standards, students, staff and related matters. That means in practice that MHEVTST must lead, coordinate and integrate institutions whose own autonomy is highly valued. While that autonomy should be protected, at times each institution's own agenda and practices become obstacles or impediments for other institutions' initiatives or for higher education as a whole. In those circumstances, MHEVTST often prefers to persuade rather than pronounce. To preserve institutional responsibility, MHEVTST generally supports a participatory and inclusive process - consultation, collaboration and negotiation - to address disagreements about policies and programmes. It must therefore exercise leadership as it enables others to take the lead.

Fifth, we must reach beyond these expectations for higher education to address a challenge that stems from Namibia's historic underdevelopment. Our higher education system must be an incubator of the ideas, the technologies and the people to use them that will enable us to break out of our syndrome of dependent development. Although we have rich natural resources and great human potential, Namibia has become a typical dependent economy. We generate revenue by exporting raw materials, with relatively little processing or value added within the country. Foreign companies are active in Namibia primarily to exploit our resources; few make significant investments. Namibia is also a typical branch economy, in which many of the decisions that most affect us are made elsewhere by people for whom Namibia is a minor interest. To transform this pattern, to seize the initiative for our own development, we take charge of studying our resources and capacities and how best to use them. We must ourselves be directly involved in developing the innovations and technologies that will enable us to process and add value to our resources. We must ourselves create economic opportunities so attractive that both domestic and foreign investment will expand dramatically. For that, we need a part of our higher education system that is integrally connected to the dynamic growth points of our economy. We need the sort of relationship between industry and higher education where our highly skilled graduates find ready employment in industries that are attracted to Namibia because of the skilled human resources available, where those industries collaborate with our institutions in research and product development, and where those industries invest directly in our education system because it is in their direct interest to do so. In short, we need higher education to be a dynamo that spurs eco-

conomic growth, not simply catching up with our competitors but leaping ahead.

Finally, as a small country in a large world, Namibia must find ways to shape and to adapt to regional and global trends in higher education.

Higher education must thus be designed to fulfill a variety of aims and tasks, of which some lie outside the education system itself. Indeed, to understand its developmental role, we must imagine higher education as a dynamo at the centre of an interrelated cluster of learning, research and development activities. In that vision, higher education institutions are not isolated and secluded cloisters but instead are engaged energetically in sharing ideas, insights and experiences with each other, with the private sector and with communities across the country, indeed throughout the region and world.

To achieve disparate goals requires a diversified higher education system in which institutions have separate missions and tasks. Structural and institutional differentiation of that sort can permit the system as a whole to address different economic, social and educational functions. At the same time, that differentiation provides for the needs and interests of a diverse student population.

Major education institutions everywhere play many roles. That is especially important in a small country with few institutions at each level. That broad reach can itself become problematic. Sometimes, in the quest to respond to multiple interests and to undertake diverse activities intended to address economic, social and community needs, institutions lose their identities as they become multi-purpose. Emphasising expansion and diversification, they lose focus. People within and outside the institution are unsure of what it is supposed to do and unable to assess how well it is doing.

To avoid those problems, higher education in Namibia will become more specialised, with each institution assigned a specific purpose. That orientation will minimise overlapping and duplicated education activity and the wasteful dispersal of resources. For that, we will assign highest priority to higher education programmes and activities that can directly enhance national capacity for poverty eradication, employment creation, economic development and providing effective and efficient public service.

As our higher education system has evolved to date, students who complete secondary school and who qualify for admission can choose among three parallel paths: teacher education, career-oriented technological education and academic education. In practice, of course, these three paths -

which will be discussed more fully below and in the chapters that follow - intersect and overlap. Indeed, although we have not yet reached that point, eventually we should see numerous examples of productive cooperation and joint programmes that link our higher education institutions. It should also be possible for students to move among these paths as required for particular courses of study.

In this understanding of differentiated missions and roles, our colleges of education have primary responsibility for preparing our basic education teachers. Since development depends on people, on their knowledge and skills, and most importantly on their ability to use their knowledge and skills, our teachers are our most important development agents. Excellent facilities, full library shelves, well-equipped laboratories and accessible computers and internet connections will achieve little in the absence of competent, engaged and caring instructional staff. Hence, it is impossible to overestimate the importance of teacher education to our national development. To play their role, our colleges of education must also be places of investigation, reflection and critique. They must be directly involved in studying learners and the learning process. Their staffs, our teacher educators, must have opportunities to continue their own education and to undertake research. It is in those respects that the approaches and strategies of our colleges of education regularly intersect and sometimes converge with those of our other higher education institutions.

The Polytechnic of Namibia has primary responsibility for career-oriented technological education. Its focus is on the driving forces of our economy, especially industry. The Polytechnic emphasises applied and practical education, insisting that its students combine the theory and skills they develop in their classrooms with direct experience in the work place. To achieve that, the Polytechnic must be sensitive and responsive to the needs of industry, needs that change as our country develops. Hence, the Polytechnic seeks to develop enduring, mutually beneficial partnerships with industry. An additional responsibility is the preparation of vocational training instructors and trainers for our vocational training centres and other vocational institutions and programmes. To achieve those objectives, the Polytechnic must also be a setting for exploration, reflection and critical analysis. Its students and staff must undertake research and present and debate their findings. Its instructional personnel must have opportunities to continue their education and to refine their own understanding and skills. Notwithstanding the Polytechnic's specialised functions and responsibili-

ties, periodically its programmes and other activities too will intersect and converge with those of our other higher education institutions.

In this setting of specialised tasks and responsibilities, the University of Namibia also has its unique mission. It must both address the economic, social and political needs of our society and at the same time promote intellectual, cultural and moral development that may have no immediately apparent social benefit. While those tasks may overlap, they can also conflict. The major objective of a university is to develop intellectual capacities and habits, attitudes focused on knowledge for its own sake and as a means to understanding, a passion for inquiry and exploration and the capacity for critical discrimination. That does not mean that our university should not be engaged in professional or vocational education, or that it should not take interest in the communities it serves. Institutions that lose sight of those other objectives quickly lose their educational and social vitality. Rather, the University of Namibia should provide a broad liberal educational foundation and educate the learned professions. The University will also increasingly assume responsibility for the education of the instructional staff at all our higher education institutions. While it is the foundational role and breadth of their mission that distinguishes universities from other educational institutions, as we have seen, the University of Namibia's programmes and activities will necessarily interact with those of our other higher education institutions.

Where the responsibilities of our different higher education institutions overlap, we shall need to determine the course of action that best suits institutional and national needs. In some circumstances, one institution may rely on another to offer a particular course of study or to manage an educational activity. In other circumstances, programmatic coherence and responsiveness to community needs may require maintaining similar programmes at different institutions. We must assess each such situation carefully, seeking to avoid wasteful duplication without stifling important intellectual initiatives.

Clearly, higher education is a complex system of equally complex sub-systems. Nearly all our tertiary institutions have been initiated and developed by governmental decisions, with the greater part of their activities financed by the government. Accordingly, the separate parts or sectors of the system must be coordinated with each other, and the system as a whole must be linked to the resources, demands and requirements of the society.

Achieving that coordination requires planning. As former President Nyerere of Tanzania reminds us, *to plan is to choose*. Many goals and objectives seem worthy and important. Planning requires setting priorities and determining which of those goals and objectives will be addressed energetically and will receive larger and quicker resource allocations.

Since most of the major providers of tertiary education are institutions created and supported by government, centralised decisions about policy and resource allocation will be necessary early in the development of the higher education sector. The government is therefore likely to be intimately involved in the growth and operation of higher education institutions. That involvement, however, risks becoming paternalistic and constraining. Individual institutions may complain about restrictions on their autonomy and limitations on their ability to shape their own policies and directions. Here again we see the need for regular consultation and a strong spirit of cooperation as we seek to develop an appropriate balance of central direction and coordination and institutional independence. Like the institutions themselves, that balance is likely to change as our country develops.

### ***NATIONAL PLANNING AND INDEPENDENT INITIATIVES***

As we reform the governance and management of higher education in Namibia, we must explore the advantages and disadvantages of two very different models. Historically, higher education in Namibia, as in most countries, has been characterised by strong centralised authority and control exercised by government. We are so used to that arrangement that often we take it for granted and assume it is the only possibility. Proposals for education reform are often phrased as "Government should decide to ..." and "The Government should require those institutions to ...".

This arrangement has several important advantages. Governmental direction permits explicit specification of national objectives and priorities and then allocation of resources to support them. Governmental control facilitates quality assurance, standardised accreditation and the creation of broadly recognised credentials. A single central authority can allocate resources to activities that have low enrolment but great national importance. Similarly, a single central education authority can promote equity by redistributing resources on a national scale, for example by drawing on the revenue from the highest income taxpayers to support schools in the poorest communities.

Yet, that is not the only possibility. Strong central authority is not automatically or necessarily responsive to the popular will. As they seek to be redistributive, bureaucracies may become self-serving and self-aggrandising. Large administrative structures can be cumbersome and wasteful. An alternative orientation envisions active competition among education institutions, both public and private. In this model, all institutions that meet appropriate national and local standards are authorised to develop and advertise programmes and courses of study. Which programmes succeed and which do not is then determined not by government decision but by enrolments. Which institutions and courses of study do students and their families deem most attractive? Which programmes are valued most highly by employers? In recent years, non-governmental education institutions of all sorts have emerged in southern Africa, including Namibia.

This arrangement, too, has important advantages. Sometimes government is slow to respond to changing circumstances or maintains programmes that have outlived their primary value, while smaller education organisations may be able to change more rapidly and more readily replace older programmes. Smaller institutions may be more responsive to community preferences and more efficient in attracting and using resources.

Recent debates about higher education in Namibia have reflected both perspectives. Some of those who are unhappy with the current situation call for stronger central control and want firmer governmental direction. Others advocate greater institutional autonomy and market-like competition to set policies and allocate resources. Sometimes contributors to the national discussion on higher education seem to assert both views simultaneously, demanding government action and decrying government interference.

As a young country, we are still developing an appropriate institutional framework for governing and managing an integrated higher education system. We are fashioning appropriate compromises between central direction and local autonomy as we proceed, guided by our theoretical understanding of what is needed, our observations of practices elsewhere and our reflections on our own experiences, both successful and unsuccessful. Indeed, one of the responsibilities of our higher education institutions is to initiate and orient research and discussion designed to help us clarify what sort of institutional framework will best meet our needs. (We shall return below to a review of alternative approaches to education planning.)

Clearly, it is timely to establish a higher education advisory council that will bring together representatives of various government and private institutions to address these and related issues. In addition to its overall advisory and coordination role, that council will have committees or forums or working groups focused on specific domains within higher education, for example, teacher education and distance and open learning.

## FINANCE

Education and training in Namibia are accorded a very high priority. Today, 10% of our Gross Domestic Product is spent on education.

For our 1998 fiscal year, the education and training sector is budgeted to receive N\$1 729 953 000, which represents 25,5% of total national spending. Training and educational activities in other sectors, such as Agriculture, Fisheries, Youth and Sport, Army and Police, increase that figure by approximately 10%. Furthermore, parastatals, non-governmental organisations and the private sector all provide education and training. Combined, these activities and expenditures reflect Namibia's commitment to its future.

Institution	Recurrent		Development		Total	
	N\$	%	N\$	%	N\$	%
University of Namibia	83 202 000	45,3	13 997 000	56,0	97 199 000	46,6
Polytechnic of Namibia	41 650 000	22,7	10 000 000	40,0	51 650 000	24,7
Colleges of Education	58 935 000	32,1	1 000 000	4,0	59 935 000	28,7
<b>TOTALS</b>	<b>183 787 000</b>	<b>100</b>	<b>24 997 000</b>	<b>100</b>	<b>208 784 000</b>	<b>100</b>

*Table 1: Budgeted Expenditures, Higher Education Institutions, 1998 Fiscal Year*

Approximately 3,9% of total national spending in the 1998 fiscal year, N\$262 425 000, is budgeted for the higher education, vocational training, science and technology subsector, an increase of more than 20% over the previous year's budget. Within that subsector, 70% of our funding is allocated to higher education, 12,7% to vocational education and training, 13,4% to our Students Financial Assistance Scheme and 0,6% to research, science and technology, with the balance to general administration and policy making. From 1997 to 1998 the budgeted allocation to the University of Namibia increased by 37,5%.

Thus, we currently allocate a great deal of our education resources to higher education. Developing new higher education programmes is somewhat like opening a new mine. In mining, it is necessary to dig holes, install equipment and move a lot of earth before there is any appreciable yield of high-value minerals. So too in education. New programmes often require significant and sustained investment well before the desired outcomes appear.

Seeking to reduce our allocations to higher education at this point in our country's history would be very short-sighted. Our current expenditures are to develop the foundation necessary for our national development. That foundation is both physical and human. Laying a weak or partial foundation would risk undermining our development efforts for many years into the future.

Allocations to the principal higher education institutions have generally been determined through annual consultations with the Ministry of Higher Education, Vocational Training, Science and Technology, guided by funding levels in previous years. One advantage of that approach is that it recognises the value of existing programmes and the special circumstances that make some programmes more expensive than others.

That approach also has three important disadvantages. First, its tendency to protect existing programmes makes it difficult to develop and implement new programmes. Quite simply, whatever appeared in the budget last year is likely to appear again this year, which means that there will be little unallocated money for new initiatives. Second, that approach tends to reinforce differences in allocation among institutions. That is especially problematic where those differences among institutions reflect values and patterns of differentiation in our past that we are working hard today to overcome. Third, where each institution negotiates its own budget, it is difficult to plan for the higher education sector as a whole.

Accordingly, it is timely to integrate the annual institutional budget consultations into a formula strategy for higher education funding within the framework of long-term planning. In that approach, allocations to all institutions within the sector are determined according to an accepted formula that links funding to priorities, that recognises the special character and role of each institution, and that seeks to provide the same level of funding for the same activities in different settings.

Generally, formula funding in education focuses heavily on the expenditure per student, though of course that should not be the only criterion for

determining allocations. If the formula were entirely dependent on per student allocations, institutions would be encouraged to maximise their enrolments, perhaps with undesirable consequences for the quality of their programmes and national long-term needs and priorities. Formula funding can, and should, take note of each institution's societal role and contribution and reserve resources for new initiatives.

Hence it is essential to recognise each institution's context, responsibilities and roles in determining its level of funding. Particular institutions provide essential and unique services that may not be fully reflected in a review of academic programmes and that may warrant special allocations. While it seems simpler to associate funding entirely with instructional programmes, doing so would devalue research, which is an essential component of higher education, and other tasks assigned to our higher education institutions. Accordingly, the funding formula must recognise the importance of those activities and must be sensitive to the varying balance among instruction, research and other activities at our higher education institutions.

Several basic principles should guide the development of an appropriate funding formula:

- (1) The funding formula needs to encourage financial and academic planning by the Government and higher education institutions on the basis of a reasonable degree of stability.
- (2) There should be an appropriate balance between the Government's need for funding to support national priorities and each institution's coherence and autonomy.
- (3) The funding formula should aim for increased efficiency and effectiveness through appropriate financial incentives and disincentives.
- (4) The funding formula should encourage higher education institutions to increase student numbers in proportion to each institution's capacity and the human resources needs of the nation.
- (5) The funding formula should be consistent with the national targets of the Wages and Salaries Commission to reduce personnel expenditures by 2% per year over the next five years.
- (6) The funding formula should encourage institutions to diversify their sources of funding, recognising that all beneficiaries - including the public at large through the government, students and their families and employers - should contribute to the cost of higher education.

- (7) The funding formula should encourage institutions to generate additional, non-governmental funding. Where an institution is successful in developing research, services and products that are eventually purchased by other government institutions or the private sector, it should retain a portion of the income that it generates to support future research and development.
- (8) The funding formula should be simple and flexible, able to adapt to a rapidly changing higher education environment.
- (9) The funding formula should ensure transparency and facilitate accountability in budgeting and financial management.

As we implement this approach we must pay careful attention to the policy implications of specific decisions about the formula to be used. For example, a major goal of a funding formula approach is to develop a system of reliable and predictable allocations on which institutions can depend in their long-term planning. Hence, the formula should constrain sharp year-to-year variations and permit multi-year funding where that is deemed desirable and appropriate. Similarly, the formula approach must address establishing fair unit costs for education and training in the different institutions; developing the rationale for apportioning the cost of higher education among government funding, direct and indirect student and family payments, private sector contributions and other sources; setting appropriate criteria for allocating funds among instruction, research, administration and other activities; ensuring transparency and accountability in allocating and using higher education resources; and creating incentives for efficiency and financial reform within institutions.

## ENROLMENTS

Of all the students enrolled in our formal education system, over 9 000 are students in our institutions of higher education. Even though enrolment in higher education is expected to grow steadily over the next five years, that will remain a small percentage of the total number of students in our education system.

Historically, funding for many of our higher education students has been provided through government bursaries, for which N\$19 026 000 was allocated in 1995/1996. For bursaries to increase at about the same rate as enrolments (approximately 10% per year), N\$27 855 966 would be required in 1999/2000. Even so, only a small number of students could be funded under the current grant system. Therefore, to use available funds

Institution		1995	1996	1997	1998 <sup>a</sup>	1999 <sup>b</sup>	2000 <sup>b</sup>
University of Namibia	Full-time	2 454	2 707	2 793	3 072	3 380	3 717
	Part-time	12	5	14	15	17	19
	Distance <sup>a</sup>	1 279	851	726	799	878	966
	Total	3 745	3 563	3 533	3 886	4 275	4 702
Polytechnic of Namibia	Full-time	1 142	1 259	1 468	1 615	1 776	1 954
	Part-time	467	528	754	829	912	1 004
	Distance <sup>a</sup>	492	949	1 408	1 549	1 704	1 874
	Total	2 101	2 736	3 630	3 993	4 392	4 832
Colleges of Education		1866	1 728	1 887	2 000	2 120	2 247
Agricultural Colleges		197	216	238	262	288	317
Higher Education Students in Other Countries		218	195	184	175	166	158
<b>TOTALS</b>		<b>8 127</b>	<b>8 438</b>	<b>9 472</b>	<b>10 317</b>	<b>11 242</b>	<b>12 256</b>
<p><b>Sources:</b> University of Namibia; Polytechnic of Namibia, Ministry of Higher Education, Vocational Training, Science and Technology</p> <p><sup>a</sup> For 1995 and 1996, some of the Distance Teaching students associated with the Polytechnic of Namibia are included in the Distance Teaching totals for the University of Namibia</p> <p><sup>b</sup> For 1998-2000, growth per year is estimated at 10% for the University of Namibia and the Polytechnic of Namibia and 6% per year for the colleges of education, while higher education students in other countries are expected to decrease by 5% each year</p>							

*Table 2: Enrolment in Higher Education*

for a larger number of students and thereby to broaden access and promote equity, we are converting our current bursary system into the new Government Student Financial Assistance Scheme, with emphasis on loans. That shift permitted us to assist 1 650 new students in 1998, compared to only 1 285 in 1997. Although we were able to provide some support to all qualified applications who had admission from a tertiary institution, many students find it difficult to pay for accommodation, transport, clothing and medical care.

## STUDENTS

Higher education students are concerned both with the issues that immediately affect them as students and with the broader issues that emerge in the society at large. At particular moments in a country's history, students assert an active and often militant role in attempting to shape their society and influence its development. Commonly, they demand a larger

role in governing their institutions and expanded participation in the national political system. Not infrequently, the larger community regards this assertion of student initiative with apprehension and sometimes actively resists it.

Within education institutions, students' demand for broader participation may clash with the technical specialisation, faculty control and formal testing and grading systems that characterise those institutions. The entire education community, from the ministry to the institutions' governing authorities, to faculty and students, to non-governmental organisations involved in education, must find creative and constructive ways to address these concerns before they threaten the quality and viability of the education system.

Leadership training for student leaders will need to be intensified. Institutions will need to develop and refine administrative machinery to reflect our deep commitment to discussion, debate and democratic participation. Partnership, trust and transparency will be important objectives. Appropriate charters must be developed and refined to specify the rights and responsibilities of institutions, faculty, staff and students.

In our culturally diverse institutions, these activities must reflect the government policy of affirmative action. For example, the Ministry will encourage female students to participate in student politics and organise capacity-building workshops to enable them to do so more effectively. Student representative councils will be encouraged to adopt constitutions that work toward gender balance.

## **THE PRIVATE SECTOR**

The Ministry of Higher Education, Vocational Training, Science and Technology expects the private sector to play an active role in shaping higher education in Namibia. Government alone cannot and should not bear sole responsibility for preparing the skilled humanpower needed for national development.

Indeed, the private sector has several important roles to play in this regard. One is to establish and maintain non-governmental education institutions that meet nationally set standards. Currently there is an increasing number of privately-owned institutions of higher learning. Many large firms have training departments. These contributions to our national education system are highly valued.

A second role is to recognise the value and importance of higher education to the development of the private sector by supporting, both directly and indirectly, higher education institutions and particular programmes and courses of study. Though often provided in the form of a gift, funding of this sort is not charity, but rather an investment in our national development.

Third, the private sector can create internships and other opportunities for our higher education students to have direct experiences in mining, industry, commerce and other sectors. Existing arrangements of this sort should be expanded to enable more of our students to combine academic and applied work in supervised and educational settings. At the same time the private sector should also increase its support for the continuing and further education of its employees.

A fourth role is to create and strengthen private/public partnerships that link higher education to the growth points of our economy. The goal here should be to increase those links where they already exist and also to use a partnership approach to develop new initiatives whose dynamism lies in the strong connections between innovative firms and higher education.

We have already begun to move in these directions. We must do so more energetically and more effectively. Hence, one major challenge now is to coordinate public and private efforts to develop the higher education sector. For that, it may be timely to create a private sector higher education forum, with participants from both the private and public sectors, perhaps as a committee of the higher education advisory council that is to be established.

## **AFFIRMATIVE ACTION**

We came to our independence after years of struggle against apartheid with a firm commitment to the fundamental equality of all of Namibia's citizens. We regard that commitment as so important that we have incorporated it in our national Constitution. Articles 10 and 23 of our Constitution explicitly prohibit racial and other discrimination.

More than six years after independence, however, it is clear that formal and informal discrimination on the grounds of race, sex and disability persist. That is intolerable. Namibia is now one nation, and not just its laws but also its practices must reflect that.

Hence, we must go beyond non-discrimination to take positive steps to redress previous and persisting inequalities. Thus, Article 23 of our Con-

stitution also enshrines the principle of affirmative action. Affirmative action means, quite simply, initiatives undertaken to assist those who continue to experience the legacies and practices of discrimination. Sometimes, non-discrimination is not sufficient to overcome deeply held prejudices and long-standing practices. To achieve equality of opportunity, we will need to recognise and redress the disabilities created by discrimination, especially in recruitment, selection and promotion. In those circumstances we must be imaginative, sensitive and persistent in developing appropriate programmes and procedures. Where one part of our population, for example women, has been refused access to particular posts, we will of course have to find ways to treat fairly those who apply. That is non-discrimination. But we must do more. We must also find ways to encourage and facilitate applications from those whose experience of discrimination and rejection has discouraged them even from considering applying. The Government has regularly reiterated its commitment to affirmative action, as have many institutions throughout our society, indeed across our region. The Protocol on Education and Training in the Southern African Development Community adopted in 1997 specifies that where they are under-represented, socially disadvantaged groups should have preference in admissions and special scholarships. Higher education has special responsibilities in that regard.

We all suffer when as a society we cannot draw on the imagination, insights and skills of major groups whose access to school or jobs is limited because they are female or poor or black or from a particular region. Our schools and other institutions are immeasurably strengthened when we recognise, celebrate and build on the rich diversity of Namibia's people. We all understand that discrimination has held us back. We must now understand that eliminating the consequences of discrimination requires more than laws that prohibit discriminatory practices.

If equitable participation in the economy is to become a reality, those who have been disadvantaged - especially those who experience discrimination on the basis of region, poverty and gender - must have fair access to education and health in our country. We must make education truly a right of our citizens. We must at the same time develop an enabling environment that will raise the economic status of women and other disadvantaged groups. Increased agricultural productivity in our country depends largely on women's development of new skills and access to new opportunities. Despite the Constitution's provision for gender equality, legislative and customary

discriminatory practices against women still exist. One major challenge of the First National Development Plan is to eradicate all discriminatory practices and laws against the advancement of women.

Our development is also troubled by individual and institutional preferences based on race. Though illegal, those practices too persist and must be addressed vigorously. Legislated non-discrimination must be supplemented by energetic affirmative action to overcome these barriers.

As it does in other domains, education must play a leading role in this regard. Our responsibilities are several. First, we must be sure that we are not ourselves perpetuating the problems. Within higher education we must continue to work assiduously to identify patterns and consequences of discrimination, to articulate and reinforce our commitment to equality, and to develop more effective strategies for overcoming structured inequalities. For that, we will need systematic monitoring, explicit accountability and mechanisms to ensure that we correct the problems we discover.

Second, we must be effective teachers. Our curricula and instructional programmes at all levels must help learners identify and resist discrimination and must help them develop approaches and strategies for doing so. Our research on learning and teaching must be sensitive to these issues and must enable us to document what we do well and what we do not and to assess progress toward equitable and just outcomes.

And third, we must assert moral leadership for our society. While specific affirmative action activities will vary from one institution and setting to another, as a community - collectively and individually - we must regularly demonstrate clearly and convincingly our commitment to recognising and redressing previous and current inequalities as we work to build an equitable and just society.

## Goals

## **TOWARD EDUCATION FOR ALL**

Several years ago we developed a general statement of objectives and priorities for education, *Toward Education For All*. Since the development of higher education rests on that foundation, it is useful to recall here the broad goals for education in Namibia set in that document. At their most basic, the goals for education, culture and training are those of the nation: equity, justice, democratic participation and respect for human dignity.

Building on that base, the Ministry of Education and Culture decided in 1992 to assign the highest priority over the next decade to four major goals and to those activities essential to reaching them: *access, equity, quality and democracy*. Other activities have of course continued to receive attention, often a good deal of attention. And of course we have not neglected the large number of things we need to do everyday to keep our schools and other education programmes running well. Still, as a society we must make choices. Our resources are not unlimited. To use those resources well, we must decide what is most important to us and then focus our attention, our creativity and our energy there. It is for that reason that we specified those four major goals for our education system.

Our strong commitment to basic education for all itself requires difficult decisions about higher education. While basic education for all is an achievable goal, higher education can serve directly only a small percentage of those students who complete secondary school. Thus, for the foreseeable future higher education will be both selective and costly. A small number of students will benefit directly from a large allocation of resources. We must understand the use of those resources as an investment in the development of our country.

Our vision for higher education is broad. We expect higher education in Namibia to enhance the national welfare through its contributions to national development, to cultivate national talent and intellectual potential, to nurture the fulfilment of our cultural aspirations, to develop a national capacity for knowledge creation, dissemination and sharing, to strengthen the national ethos of peace, equity and democracy, and to promote international peace and understanding. To realise this vision, learning, teaching, scholarship, research and service must be dynamic, interactive and mutually reinforcing.

Teaching in higher education must be organised to cultivate and sustain a culture of disciplined thinking and inquiry and to nurture a commitment to

academic achievement and excellence. Effective teaching reflects our commitment to quality and high standards and at the same time extends opportunities for learning to a larger and broader section of society. For higher education teaching to be effective, it must be linked to research and knowledge creation.

Higher education institutions and programmes are expected to contribute to examining and understanding issues confronting our society. Research is thus crucial to making teaching relevant and meaningful to learners. Research enhances the national capacity for problem solving, creates institutional capacity for excellence, encourages rigour in academic pursuit, reinforces the power of intellect and the practice of disciplined inquiry, and creates a leading edge for learning and innovation.

Underlying these efforts is learning, which revolves around a cumulative process of acquiring information from many sources, converting information into knowledge by integrating it into coherent understandings, applying those understandings to familiar and new situations, and at the same time constructing and improving a framework for creating new knowledge. This vision of higher education regards knowledge as shared experiences and as an exploration undertaken in partnership. Learning builds on curiosity, creativity, inventiveness and innovation. Lifelong learning must be the ultimate goal of higher education as it helps us develop a learning society.

## **HIGHER EDUCATION FOR DEVELOPMENT: MAJOR GOALS**

Since we cannot provide universal access to higher education, and since we have special expectations for higher education that reach beyond and are more focused than the objectives we set for basic education, we will orient the development of our higher education system around four broad goals, using them to guide the priority and resources to assign to each activity: *equity, quality, democracy and relevance*. To make progress toward those goals we will also need *effective, goal-oriented, management*, which includes *affordability, efficiency and sustainability*. Extending the commitments we set out in *Toward Education For All*, let us consider briefly what these goals mean for higher education in Namibia.

### **EQUITY**

Our higher education system is necessarily selective. Only a few of the Namibians who complete secondary school will be able to enter our higher education institutions. It is essential, therefore, that we work imaginatively

and energetically to ensure that selection for and progress through higher education are equitable.

At its simplest, that means that we must be sure that we select our higher education students on the basis of their accomplishments and their potential. To do that, we must be sure that our selection process does not provide special advantages to particular groups in our country on the basis of their race, their religion, their ethnicity, their region of birth, their sex, or the privileges they enjoyed in the past.

Sometimes advantages of that sort can be readily identified and corrected. Often, however, advantages of that sort are very subtle consequences of the measures and procedures we use and are therefore much more difficult to discern and address. For example, if a student is told she cannot be admitted to a particular programme because "girls do not do well in Mathematics," we can see immediately that her rejection is contrary to our non-discrimination policy, and we must proceed to remedy the situation. But discrimination may be much more subtle. There may be no students who are told they have been rejected because they are female. Yet, when we look at enrolment patterns, we may discover that particular programmes or courses of study have far fewer female students than we would expect based on the number of females who successfully completed the previous level. In that circumstance, ensuring equity requires that we have effective and functioning monitoring systems that call such situations to our attention, even when there has apparently been no explicit discrimination, and accessible and effective corrective procedures that can address both the individual case and the broader pattern.

As we develop strategies for promoting *equity* in higher education, it is important that we understand the difference between equity and equality, which are related but not identical. *Equality* refers to our commitment to treating all people in a similar situation in the same way. In the example we have been considering, ensuring equality means that all students with comparable examination scores and similar results on the other assessment measures that we use to review applicants - regardless of race, sex, religion, region, ethnicity - must have an equal chance to be admitted. No students should stand a better chance because of where they were born or the colour of their skin.

Most often, we think of equality in terms of equality of opportunity. We work hard to be sure that all who begin have an equal opportunity to succeed. But if patterns of discrimination can be subtle and difficult to discern,

how can we know if we have in fact achieved equal opportunity? For that, we must also look at results. If we find that all of the students who are selected for a particular programme, or who have the highest grades, come from one group in our society, then we must ask if that group has had a special advantage, even if that advantage was not explicit or clearly visible and even if those involved were themselves not fully aware of that advantage. Again we see the importance of effective monitoring systems and corrective procedures.

Equality, then, has to do with sameness, treating people in the same way. *Equity* has to do with fairness and justice. While ensuring equality is often a major step toward achieving equity, sometimes the two are in tension. Where there has been systematic discrimination and disadvantage, ensuring equity - justice - may require treating people differently.

Where some students have a weaker secondary education because the schools in their region have historically been under-funded, or less well equipped, or had teachers with less experience or lower qualifications, achieving equity may require providing to those students some additional assistance to strengthen their skills and fill the gaps in their preparation. Where some students have been unfairly told throughout their schooling that they are not likely to succeed or that they are not the sort of people who go on to higher education, it may be necessary to provide special encouragement to them to see themselves and their chances in a more positive light and to apply to our higher education institutions. Even after their admission, we may need special efforts to support students who are potentially very capable but who have been systematically discouraged about their prospects. In these circumstances, we must go beyond non-discrimination to take affirmative action to achieve equity.

*Although apartheid is behind us, our society remains unequal. Achieving equity therefore requires both eliminating overt and less visible patterns of discrimination in higher education and redressing the persisting consequences of societal inequalities.*

### QUALITY

For higher education institutions to play their developmental role for our country, they must establish and maintain high quality in their programmes and courses of study. High quality in higher education has several components.

First, we must be sure that our higher education system achieves internationally recognised standards in the disciplines and domains of study that we offer. In that respect, higher education has an international character. We must expect our mathematics and chemistry and information systems students to achieve the level of understanding and skills development demanded of students in similar fields in comparable institutions in other countries. In the same way, we must expect our faculty periodically to participate in international scholarly meetings and to publish their research results in established international journals in their fields. For that, Namibian higher education institutions must participate in regional, continental and international associations of similar institutions, as they have already begun to do.

We must be careful, however, that we do not rely solely on standards of quality set elsewhere. Though important, internationally recognised standards may not be relevant to the Namibian situation or may incorporate measures and rankings at odds with the priorities we assign in our own country. Even worse, international standards may function in practice to impose on us values, or ideas, or patterns of academic organisation quite at odds with our own decisions about what matters most and why. Hence, uncritical adoption of internationally recognised standards will perpetuate our dependence in the very institutions that must take the lead in ending that dependence and forging new directions.

Therefore, second, we must establish standards directly relevant to Namibia and regularly and systematically assess our higher education students' and institutions' progress toward them. Those standards must reflect what is unique about Namibia and what we expect from our students and institutions, rather than what may be considered high quality in, say, Paris or Berlin or Berkeley or Hong Kong. For that, we shall have to be imaginative and innovative in developing appropriate approaches and procedures, especially because our higher education sector is so small. We shall return to this issue in the context of our discussion of responsibility and autonomy for our higher education institutions.

Third, we must also be sure that our understanding of quality incorporates our own education reforms. *Toward Education For All* outlined a fundamental reform agenda for education in Namibia, beginning with basic education and continuing throughout our education system. That reform agenda has important implications for higher education that must be reflected in our quality measures. To take just one example, we have adopted a more encompassing strategy for assessing the work of our school stu-

dents. Rather than relying nearly entirely on examination marks, we have introduced a more student-focused approach that includes attention to results on teacher-set tests, students' papers, portfolios and presentations, and regular continuous assessment along with examinations. To implement that approach effectively our teachers must develop and refine skills not expected of teachers in countries that continue to rely exclusively on national examinations to evaluate student achievement. That, in turn, requires that our teacher educators incorporate this approach into their courses. Accordingly, our evaluation of the quality of our teacher education programmes must address their success in helping our teachers become knowledgeable and skilled in this reformed approach to student assessment, including its underlying theoretical rationale, appropriate pedagogical practices and on-going refinement. While that is one small example, the general point is clear. If we are serious about reforming our education system, then those reforms must be reflected throughout the system, including in our measures of the quality of higher education.

Fourth, our major goals for higher education must also be incorporated in our understanding of quality. Explicit attention to equity, democracy and relevance, as well as effective, goal-oriented management, must feature prominently in the standards we set for our institutions. Quite simply, an institution that maintains inequitable selection procedures or is inattentive to national needs and priorities is not offering high-quality education, even if it achieves international standards in the instruction of, say, language or human anatomy.

Higher education quality has to do with both individuals and institutions. As we demand high quality work of our students, so must we expect high quality programmes and courses of study at our higher education institutions. Assessing quality, therefore, must involve evaluating both students' achievements and the accomplishments of our higher education institutions. That institutional evaluation, in turn, must be both individual and collective, since in many areas the quality of higher education in Namibia depends on effective cooperation among our institutions.

*Improving the quality of higher education in Namibia requires a strategy that incorporates both internationally recognised standards and specifically Namibian needs and priorities and that evaluates the accomplishments of both students and institutions.*

## DEMOCRACY

For many years Namibians struggled for democracy. We continue to value it highly, and we are aware of the importance of nurturing the culture of democracy. To strengthen and protect what we have accomplished thus far, democracy must be a major focus for and characteristic of our higher education system. In this regard, higher education should enable society to understand itself and the world around it. Among its other roles, higher education must function as the conscience of the country.

*Toward Education For All* stressed the importance of learning about democracy in all our schools. We must continue that learning into our institutions of higher education. Where appropriate, our higher education students should learn directly about theories and practice of democracy in Namibia and elsewhere. They must understand that democracy means more than voting and elections. Malnutrition, economic inequality and illiteracy can be obstacles to democracy that are far more powerful than formal rules that limit who can participate in elections. Democracy is not something that is accomplished simply by creating a particular institutional framework. Rather, democracy is a *process* of deliberating issues, fostering broad participation and making decisions that reflect the popular will. Often democracy seems cumbersome, inconvenient and inefficient. Even where its practices are well accepted, democracy remains fragile and is always at risk. Establishing democracy is therefore necessarily an ongoing process that requires regular attention and constant vigilance. Our higher education students must therefore learn too about challenges and threats to democracy, both direct and indirect. They must learn to use that knowledge to protect what we have achieved and strengthen it still further.

Beyond the specific attention to democracy in history or civics or sociology or law or other courses, we must also integrate democracy into the fabric of all our courses of study. Our future teachers at all levels, of course, must be able to teach about democracy. Equally important, prospective teachers, education administrators and school heads, for example, need to understand the importance of students', parents' and community participation in school governance and how that can be accomplished. Our students intending to work in industry must understand the roots and practices of collective bargaining between employers and unions and why that is so vital to our democracy. Nurses and other health practitioners must learn how to become effective participants in formulating national health policy,

both drawing on their knowledge and expertise and at the same time ensuring that the voices of non-specialists - all Namibian citizens - are also heard and respected. Lawyers and social workers must become skilled not only at applying the rules of our society but also at becoming advocates for those who understand the rules less well and who are less effective in securing their rights.

To teach about democracy, we must also practice democracy. While we can all agree on that principle, there will be disagreements on how best to implement it. Who should participate in making which sorts of decisions? On what sorts of issues should instructional staff have the determining or most influential voice? When should students' input, or assent, be sought or required? How to reconcile the value of extended debate with the need for rapid and unambiguous decisions? How to facilitate broad discussion while protecting the privacy of individuals and institutions? Acknowledging disagreements on these and related issues and finding ways to address contending views are, after all, themselves part of democratic practice.

Certainly, all of our society's institutions have circumstances and moments when responsible authorities must make firm decisions, sometimes with little direct or immediate consultation. But in democratic institutions those authorities will have been selected according to clearly delineated and public procedures and will be accountable for their decisions in orderly and systematic ways. All associated with those institutions, including instructional staff, other employees and students, will have opportunities to make their voices heard and to play a role in reaching important institutional decisions. Under nearly all circumstances, democratic institutions will prefer consultation and deliberation, even when that seems cumbersome and unending, to rapid recourse to authority and force. The rules under which our higher education institutions operate must reflect these concerns: participation, consultation, accountability, transparency, shared responsibility for decisions and their implementation. Where appropriate, we will need to provide workshops or courses or other opportunities to enable those involved in higher education to understand democracy better and to become more proficient at its practice.

*To nurture and protect democracy in Namibia, our higher education institutions must not only teach about democracy. They must also be democratic, even, indeed especially, when that is wearying and uncomfortable.*

## RELEVANCE

Everyone agrees that education institutions must be relevant to national needs. But what does that mean in practice? Dictionary definitions of "relevance" and "needs" are insufficient for ideas intended to guide public policy. What our society needs and how our education system can develop programmes relevant to those needs are specified in ways that are complex and generally not very orderly or direct.

Let us consider national needs. At the basic level there is little disagreement. We need a rate and pattern of economic growth that will enable us to improve our standard of living and to develop our spiritual as well as material lives. No one should go hungry, or lack adequate housing. Everyone should have access to learning settings. But do we need steel mills or a microelectronics industry? Or do we need more boreholes and grain mills in our villages? Do we need more dams and a denser electric power grid? Do we need more televisions and automobiles? Do we need higher quality and greater reliability in our public services? Do we need better training facilities for our athletes or soldiers? And what of our needs for moral and ethical behaviour, or non-violent conflict resolution, or equitable treatment of all our citizens? And where do we rank addressing our cultural, aesthetic and literary needs? The point of course is that as a society we are continually redefining our needs and priorities. When we do that well, the result reflects broad participation and sensitivity to the situation and interests of the different elements in our diverse population.

The implication for higher education is clear. As it undertakes its formal responsibilities to develop critical reasoning and higher level skills, higher education must be attentive to and participate in the process through which we set our agenda. Higher education institutions must be able to indicate how they are responding to national needs. They must as well be able to explain why they have chosen to address some expressed needs and not others. And they must demonstrate their ability to revise and modify their directions as our national goals and priorities evolve.

Relevance is also an idea best understood in terms of context and process. Often, for example, observers note that most people in Africa are rural agriculturalists. From that observation they assert that education should focus its attention on the tools and skills that farmers will need. From that perspective, schools that teach languages in order to introduce young people to other cultures or that assign books intended to expose learners to new ideas and different ways of thinking or insist that students use micro-

scopes to understand and master systematic observation and comparison are wasting time in irrelevant programmes. But if so, how will we ever escape our dependence on others' ideas and technologies? How will we move beyond exploiting non-renewable resources to creating and developing new resources? If no Namibians experiment with sub-nuclear particles, or write new computer programmes, or devise new approaches to dysentery, malaria and AIDS, how can we assume responsibility for our direction as a nation? How will we prepare the next generations to innovate, to invent, to create?

Education must expand our horizons, not limit them. Determining what is relevant requires not a simple statement of the obvious but an ongoing engagement with values, expectations and constraints in our society. Relevant programmes emerge not from an authoritative decision but from collaboration and negotiation.

Our higher education programmes will meet the criteria of relevance if they are able to -

- create a positive environment for academic pursuits;
- inspire new talents and fuel the enthusiasm of students toward academic work;
- provide opportunities for reflection and creativity among the academic community;
- create a cultural anchor to give direction and social purpose;
- meet the national needs for human resource development; and
- demonstrate solid contributions to social change and development.

## EFFECTIVE, GOAL-ORIENTED MANAGEMENT

Achieving these four goals - *equity, quality, democracy and relevance* - requires what might be termed a fifth goal, *effective, goal-oriented management*, which in turn is best understood as a cluster of operational objectives for our higher education institutions: *affordability, efficiency and sustainability*. While administrative matters and managerial practices are not the primary concern of a national policy paper, they warrant mention here precisely because failing to address them will make it impossible for higher education to play its developmental role in Namibia.

## AFFORDABILITY

As we have already noted, higher education reflects a major commitment of our national resources to a small number of institutions and a few

students. Even with that major allocation, there are regular pressures to create new programmes and degrees, to expand those that exist and to upgrade our facilities. Sometimes the case for a new course of study, or a more capable computer, or expanded research support is compelling. In addition to asking whether or not a proposed programme is academically sound, meets an important need and is a high priority, we must also ask whether or not it is affordable.

Affordability has several components. First, we must know how much a new programme or facility expansion or piece of equipment will cost. That cost includes direct outlays of public funds as well as fees and other expenditures by students and their families and spending by other organisations. Second, we must also have a reasonable projection of recurring costs and how they are to be paid. Staff will have salaries. Facilities will require maintenance. Equipment will require replacement. Even ostensibly low-cost initiatives, say an advanced research seminar that does not require additional staff, may incur significant continuing costs, in this example perhaps in the form of library acquisitions, data processing capability and internet access. Indeed, to continue this example, the longer-term funding needs, which may include support for field research and publication of results, may significantly exceed the initial cost. Third, we shall need to know whether a proposed activity expects to generate income, and if so, how much and when. Education is a continuing process, often with long time horizons. All the more important, therefore, that we understand affordability over that longer term.

Considering affordability also requires us to explore alternative strategies for reaching desired objectives. We may decide that meeting our national development objectives requires creating a new course of study within higher education. Indeed, we regularly consider proposals of that sort. As we do so, and as we examine the cost implications of those proposals, we need to ask whether or not we can achieve our objectives by sending the few students likely to be involved to an institution somewhere else in the region or overseas. Perhaps we can collaborate with our neighbours to develop that course of study as a regional programme, with both funding and students from several different countries. Alternatively, might the demand for that course of study be effectively served by a distance education programme, or a combination of residential and distance education?

Addressing affordability thus requires asking what are the real costs, in both the shorter and longer term, of a proposed activity? How might we

reduce those costs without reducing the quality or utility of the activity? In what ways might the proposed activity generate income that reinforce rather than compromise its objectives and quality? Is there an alternative strategy for accomplishing the objective for which that activity has been proposed? Achieving affordability requires integrating accurate and reliable answers to those questions into our decision about the proposed activity.

### **EFFICIENCY**

In Namibia as elsewhere, the resources allocated to education represent a significant part of what the government spends each year. Higher education enrolls fewer than 2% of our students but accounts for 15% of that spending. Since we devote more of our annual budget and a larger percentage of our gross domestic product to education than many other African countries, it seems unlikely that we will be able to increase significantly our overall national public spending on education. That is so even though the actual value of what we spend per learner is substantially less than comparable expenditures in most of the countries of the North Atlantic and Japan. If the education gap between the richer and poorer countries is not to continue to expand, we shall have to accomplish more with less.

Hence, it is essential that we use our education funds wisely and carefully. Our higher education system must be as efficient as we can make it.

But what does efficiency mean for education? In manufacturing, working efficiently generally means reducing the costs of the inputs that contribute to the total cost of production. For example, if workers can produce more in the same time, production has become more efficient since the amount of time required to produce each unit has been reduced. Similarly, reducing the waste that must be discarded, say the excess material that must be trimmed off in textile production, also increases efficiency, since more textiles can be produced from a given quantity of fabric. Reducing the number of finished pieces that are rejected - that is, improved quality control - also increases efficiency, since the same amount of raw materials and labour yields a larger volume of marketable products.

These manufacturing examples are not readily applicable to education, especially higher education. That is so in part because the principal goal of education is not a product but a process with multiple dimensions - learning, understanding, enhanced creativity, development of specific and general skills, ability to solve problems and to apply knowledge to new settings, development of self-reliance and self-confidence, reinforcement of national

unity, and more - and in part because learning in its fullest sense is so difficult to measure. Unfortunately, far too often commentators assume that education is like manufacturing and try to apply strategies for increasing efficiency in production to education institutions.

It is common, for example, to find efforts to measure education efficiency in terms of spending per student or in terms of the number of teacher hours allocated to each graduate. In that perspective, reducing the spending per student, or increasing the number of students per teacher, would increase efficiency. On the face of it, that seems reasonable. If each teacher is currently responsible for say, 30 students, then increasing the class size to 40 students would increase the output without increasing the cost for the teacher. That is, the spending per student would go down, which seems to be more efficient. But then why not have classes of 50 students or 100 or 500? Each time we increase class size without increasing the number of teachers or their salaries, we seem to have greater efficiency. All of us understand, however, that ever larger classes do not improve our education system, because the important result of education is not the number of students but *learning*. And we worry that in very large classes, students will learn less. If the quality and quantity of learning are what we deem important, then we cannot use the number of students or number of graduates as the primary measures of what our education system accomplishes.

Despite many years of effort and an enormous volume of research, educators everywhere find it difficult to measure learning very precisely. Some dimensions of learning are of course easier to measure than others. We can determine whether our physics students can state Newton's laws or our geology students can define plate tectonics. But it is much more difficult to assess how well they can apply the laws and definitions that they recall to the problems and situations they encounter when they complete their education. Many of the important results of higher education take a long time to become visible. Immediate measures of achievement may not be effective indicators of those longer-term consequences. Perhaps most difficult of all is to assess how effective our students will be in generalising what they have learned as their jobs change or as they move from one field to another. How shall we measure how well we prepare our students to take the initiative in conceiving of new ways to do things or to create new jobs, indeed whole categories of new jobs?

These challenges in measuring what we accomplish in our education system have led those responsible for basic education to adopt a broader

view of assessment, adding several different sorts of evidence to the examination results on which we have traditionally relied. A comparable review of assessment in higher education is timely.

Efficiency in education differs from efficiency in industry in another important way. In manufacturing, whatever is produced is the object of the process. Dresses, shirts and trousers are the objects of textile production. We can produce them more efficiently by reducing the cost of the raw materials, reducing waste in production, improving the output quality and providing better training and equipment so that workers can produce more in less time. The dresses, shirts and trousers do not play an active role in their production. Education, however, is an interactive process. Unlike dresses, shirts and trousers, learners can and should play an active role in their education, indeed assuming a good deal of responsibility for it and helping us to improve courses, programmes and institutions. What matters most, then, is not how many students are in each class or how many students graduate or how much of an instructor's time is allocated to each student, but rather how much and how well those students have learned.

All of these problems make most of the approaches used in manufacturing to assess and improve efficiency not directly appropriate for higher education. It is useful to recall here a point made in *Toward Education For All*: the most appropriate vantage point for examining how we use our funds for higher education is that of our *learners*. If we reduce spending, or modify the curriculum, or expand classes without improving learning, then we will not have improved the efficiency of our education system. A learner-centred approach in higher education assumes that most students and participants in education programmes can learn and succeed. Within that framework, we must assess all of the components of our higher education system in terms of how they support or hinder effective learning and whether or not they provide to all learners a fair opportunity to complete and excel in their courses of study and to be selected for additional education opportunities. That orientation then provides a framework for determining how best to use our available resources. Each allocation of financial, administrative, curricular and human resources can be evaluated in terms of its contribution to the learning process.

To put that somewhat differently, achieving efficiency in higher education requires focusing less on inputs and more on results. Although we spend a great deal on higher education, we also spend too little. Hence, we must be less concerned with reducing spending and more concerned with

achieving the maximum impact and benefits for what we do spend. In many circumstances, cutting expenditures may reduce, not increase, efficiency by impeding learning. That does not mean that we should tolerate waste and misuse of available resources. It does mean that we need to develop a clearer focus on what we are trying to accomplish and how we plan to do that and then to assess our spending in terms of the learning, both shorter- and longer-term, that results from what we do.

To be able to make these assessments, and thereby to improve efficiency, we must be able to see clearly how our resources are used. Currently, our accounting and reporting systems make it difficult to understand patterns of spending and the priorities they reflect. Even senior officials cannot be sure that actual expenditures are entirely consistent with the policies and priorities we have adopted. That is especially problematic in a setting where we value institutional autonomy and responsibility. As we maintain institutional autonomy, we must also work toward what is sometimes termed transparency. Our managerial, administrative and accounting procedures must not obscure what we spend and how and when we spend it. Accurate, reliable and timely expenditure information is vital to efficient use of our resources.

Improved information on students and courses of study is equally important to efficient operation in higher education. Currently, we find it difficult to develop an accurate picture of enrolments, progress and completion in higher education. Our different institutions, for example, do not use a common strategy for counting full-time, part-time and occasional students, rendering comparisons difficult or impossible. One result is that the enrolment and completion data reported by our Education Management Information System sometimes differ sharply from comparable data reported by our higher education institutions.

Increasing efficiency requires accurate and consistent information about spending, institutions, programmes and students. Hence, increasing efficiency requires that we improve our data collection and reporting. Most important, we must be sure that needed information is available in a timely manner to those who must use it.

In general, then, our most powerful strategy for increasing efficiency in higher education is to establish clear accountability. Decision makers, educators, administrators, students and our communities at large must all be able to see the resources we have allocated and how they are being used.

And they must have effective channels for raising their concerns and influencing both the volume and pattern of expenditures.

This perspective on efficiency also highlights the importance of cooperation among the elements of our higher education system. We have a small number of institutions and many courses of study with relatively few students. Wherever possible we need to find ways to make the investments in one institution or programme also of benefit to other institutions and programmes, whether directly or indirectly.

### **SUSTAINABILITY**

Having come to our independence with a severely underdeveloped higher education sector, we immediately faced demands for new programmes and courses of study. Indeed, even as we have developed our higher education institutions, those demands have continued. As well, we have continued many older programmes as we assess their role and priority for our development objectives. Our institutional autonomy in higher education has meant that sometimes we find what seem to be similar or overlapping programmes at different institutions with no clear strategy or procedures for integration or cooperation. Ironically, we may be simultaneously charged with doing too little and doing too much. Unfortunately, both charges may be accurate.

If we maintain programmes that have outlived their utility and simultaneously inaugurate programmes that have few students and limited demand from our society, we shall be unable to sustain what we have initiated. That will lead to both a misuse of resources and a loss of respect and legitimacy.

Quite simply, we must be able to continue what we begin. Limited resources will regularly require difficult decisions about what we can and cannot do well. In practice, that requires that we maintain a clear focus on societal needs and demands, periodically assess and reassess priorities and allocations, recognising that it is preferable to do a few things very well than to do a mediocre job in multiple domains, strengthen cooperation among higher education institutions, energetically and persistently develop links with the productive sectors in our economy, and where appropriate work to develop income-generating activities that reinforce our education mission. Let us now consider the autonomy and responsibility of our higher education institutions.

## **Responsibility and Autonomy**

## **EDUCATING THE FEW IN THE SERVICE OF ALL**

We came to our independence with a severely dysfunctional education system. That required us to address several objectives simultaneously. First, we needed to integrate - both racially and administratively - the separate and unequal departments we inherited from our apartheid past. Second, to make education more equitable, we needed to reallocate resources to the benefit of the majority of our citizenry. And third, we sought to transform education programmes whose ethos emphasised authority and punishment into learning experiences characterised by discovery, participation and a student focus. Our challenge has been to retain the strengths of earlier efforts without entrenching further the advantages and privileges our prior system created and protected. To achieve that, we shall have to develop a manageable balance between central direction and institutional autonomy.

Embodied in our Constitution, *education for all* is the principal goal and commitment of our national education system. We must ensure that all Namibians have access to basic education and that the quality of that education continues to improve. Our earlier white paper, *Toward Education For All*, provides policy guidance on how to address that responsibility.

To achieve basic education for all we shall of course need creative and competent teachers, curriculum developers, principals and administrators. That is, to provide basic education to all Namibians we need an effective system of secondary and higher education. To staff our schools we need imaginative and well-educated teachers. To prepare our teachers, we need equally imaginative and resourceful teacher educators. And to organise and manage the preparation of our teacher educators, we need informed, insightful and inspiring education professors and researchers. One major role of higher education, then, is to enable us to staff, develop and improve our system of basic education.

Higher education plays a similar role in many other domains. Its institutions must educate people for responsibilities that require higher level competencies and for posts where they are involved in educating others. It must go beyond equipping people to fill jobs. By developing the skills needed to create and apply knowledge, higher education must enable our learners not only to seek existing posts but, more important, to create jobs and to conceive of entirely new job categories.

Higher education must do even more. It bears a major responsibility for ensuring that as a society we do not stagnate. Higher education must fa-

cilitate experimentation and stimulate innovation. It must encourage us to pose difficult questions, to challenge prevailing understandings, to criticise the ways we have become accustomed to doing things and to try new approaches to old problems.

Innovation and critique are inherently risky. Often, we are reluctant to try new things or to give up old ways. In families, in industry, in business, even in education, it frequently seems preferable to leave things the way they are, to avoid the undesirable and perhaps unforeseen consequences associated with change. People in authority may feel threatened when others, especially those who are much younger and less experienced, challenge their recommendations and decisions.

Still, if we do not change, we stagnate. As a nation, if we do not develop our own national agenda and priorities, if we do not take charge of our own economy, we will remain a dependent country, pushed about by the decisions of countries, companies and organisations elsewhere. Hence we need our higher education system to play an essential and generative developmental role.

Our higher education institutions directly serve a very small number of students. Since their costs are high and enrolments small, the cost per learner is large. Thus, our investment in higher education is substantial. Through their labour, all Namibians are paying for the education of a few of their children. We need to be sure that our investment in higher education is well used.

At the same time, we must have a broad and long-term view of that investment. We must recognise that scepticism and critique are essential to learning. We must understand that it will be many years before we reap the benefits of some of our investment in higher education. We must be patient when promising initiatives turn out to be less fruitful than anticipated. We must as well be demanding and critical as we evaluate our higher education system and insist that it be accountable for what it does.

## **A DIFFICULT CHALLENGE**

Our education system must be responsive to our national needs. To do that effectively, its institutions must have a certain degree of autonomy. But that responsibility and autonomy are sometimes in tension.

We are committed to enabling our citizens to develop their abilities and reach their potential. Effective education systems make it possible for learners to progress even beyond their own expectations. But a national educa-

tion system must do more than help individuals develop their skills and understandings. It must also help our society learn and grow. It must equip our citizens with the skills needed to staff and manage our economy and our political system. Even more, it must enable us to innovate, to create, to invent. Our workers must be able not only to use the tools they are assigned but also to think of better ways to use those tools or to develop new tools altogether. Our farmers must understand not only soils, seeds and insects, but they must also be able to compare the output of one approach with the harvest from another. Our service employees must not only understand and apply regulations and procedures, but they must also be able to make their services more accessible and responsive to their fellow citizens and indeed to reform the administration itself. Education thus has both an individual and a collective responsibility.

The history of education is full of horror stories about efforts to impose tight control over schools, teachers and learners. Sometimes all the students in a particular grade at every school in the country are expected to be reading the same paragraph on the same page in the same textbook at the same moment. Sometimes administrators seek to substitute television programmes for instructors because they do not have confidence that their teachers and learners can achieve fruitful education results. Eventually, nearly all of those efforts at strict central control are abandoned as it becomes clear that they stifle rather than enhance learning.

At its core, learning depends on direct interactions between teachers and learners and among learners. Our challenge, therefore, is to enable teachers to develop the skills needed to organise, manage and motivate the education settings. As we do so, we must also be sure that teachers are involved in important decisions about the education process, including developing curriculum and teaching strategies. Teachers will surely be much more effective in implementing a curriculum in which they have had a developmental role. And they will be more effective in using pedagogical approaches to which they contributed and which they helped to modify and refine.

All education institutions thus require some autonomy of action. That is especially the case at the tertiary level, where we educate our teachers and where we expect students to have the competence and self-confidence to assume demanding responsibilities and act independently.

A term used for one major dimension of that autonomy in higher education is *academic freedom*. The basic notion is that if students are to be-

come effective problem-solvers and if students are to be encouraged to develop new ways of conceiving and approaching problems, then they must be encouraged to ask difficult questions and to risk departing from the old way of doing things. For that to be possible, their instructors must be able to set challenging and critical readings and assignments without constantly worrying that they will be sanctioned or even lose their jobs for exposing their students to currently unpopular ideas and analyses. It is for that reason that higher education institutions have developed a tradition of stronger job security for their staff and a resistance to external intervention in their programmatic decisions.

With that autonomy, however, come responsibility and accountability. While it is important that the leaders and staff of our tertiary institutions be able to develop their education programmes, we must also expect that they will be guided by a clear sense of national needs and that periodically they will be accountable for their decisions.

Balancing autonomy and responsibility is perhaps the most difficult challenge for higher education.

### **APPROACHES TO PLANNING AND RESOURCE ALLOCATION**

In view of the multiple and sometimes conflicting expectations of higher education and of the large investment in relatively few learners, how shall we determine which programmes to support and which to reduce or drop altogether? How shall we decide which proposed new activities ought to be developed and which other proposals must be deferred or rejected? How shall we judge which institutions ought to be reorganised or merged with other institutions or dissolved, or which recommended new institutions ought to be created?

Several different approaches have guided education planning throughout the world in recent years. Most have concentrated especially on the economic role of higher education and on employment rates among its graduates. One approach emphasises the role of the education system as the developer of socially needed skills. Often termed *humanpower planning* or *manpower planning*, this approach seeks to relate the projected need for particular skills to programmes and priorities within education. In its simplest form, this approach estimates the society's need for people with specified skills and thus particular education qualifications and then authorises or declines to authorise education programmes on the basis of their contribution to developing the needed skills. The projected need for

civil engineers, for example, is used to determine the appropriate size of the civil engineering faculty and the number of students it should admit. That in turn has implications for the number of students who study science subjects and mathematics (or whatever else is deemed to be part of the foundation for prospective civil engineers) in secondary school. And that in turn has implications for the number and specialisations of teachers needed. In practice, projecting human resource needs and using them to guide decisions about education programmes is rather more complex than this description suggests, but its underlying principle is clear: projected needs should be the principal determinant of current programmes and allocations.

While still widely used, that approach has also been widely criticised. In practice, it is difficult and perhaps impossible to develop precise projections of needed skills very far into the future. That is especially problematic in a growing economy in the midst of rapid industrial and technical change. Just a few years ago, manpower planners in Africa had no entries in their job lists for computer programmer or microelectronics technician or education technology instructor. Yet clearly today every African economy needs those skills. As well, this approach tends to underestimate the extent and rapidity of career changes. In practice, young people are unlikely to remain throughout their lives in the job or even branch of employment they began when they finished their schooling. While some observers are dismayed when, say, an engineer becomes the manager of an engineering enterprise or a doctor becomes a regional medical officer, others point to the benefits of technical expertise among managers and to the value of transferable skills and experiences. A third major problem with this approach is that it understands education primarily in terms of its skills training consequences and thereby tends to disregard intellectual growth, the development of critical and problem-solving abilities, the encouragement of creativity and expression, and many other dimensions of education that have no obvious and direct vocational outcome.

A second approach to education planning emphasises the skills needs of particular organisations. This *personnel planning approach* also seeks to relate projected skills needs to education programmes and allocations, but at the level of the firm or organisation rather than at the level of the society as a whole. Grounded in specific settings, this orientation does avoid some of the difficulties of estimating future skills needs, but it retains many of the problems associated with the manpower planning approach. Especially troubling is that the non-vocational aspects of education tend to be devalued.

Both of these approaches assume that the majority of the population will be in school and then enter wage or salaried labour. In practice, however, many Namibians have had little schooling, work in agriculture where only part of their labour is visible in official statistics, or remain underemployed or unemployed for lengthy periods. If the basic assumptions of these approaches take little account of this part of the population, their needs will be little reflected in decisions about education programmes and allocations.

A third approach, then, emphasises the broad societal interest in access to education, either in general or to particular programmes. Using this *social demand* approach, decision makers approve (or do not approve) new programmes based on what is sought by the potential consumers of education, learners and their families.

This approach, too, is both widely practised and widely criticised. While focusing on demand enables education institutions to be very sensitive to changing perspectives and preferences in the population, it is also subject to misunderstandings, fashions and special circumstances that make it difficult to develop a coherent and integrated national education agenda. Having noticed that doctors generally have higher incomes than teachers, many students and their parents, for example, will prefer a medical degree over a teaching diploma. Clearly, however, the society needs many more teachers than doctors. If decisions are to be determined primarily by student and parental demand, how will it be possible to redirect the pressure for more medical education into expanded teacher education?

A fourth approach to education planning locates principal programmatic decision making within education and training institutions. In this *supply* orientation it is those institutions that determine which subjects to teach (or not to teach), which new activities to undertake and how many students should be admitted to their courses. Each institution consults with the prospective employers of its graduates as it deems appropriate. Clearly, this approach maximises institutional autonomy. Where institutions are especially sensitive to their economic, political and social context, that autonomy may be very desirable. At the same time, this approach is not readily compatible with efforts to set national policies and priorities. Nor does it facilitate coordinating the activities of different institutions. And where institutions are primarily responsive to their own internal pressures for new and enlarged programmes, the risk of a mismatch between labour market demand and graduates' specialisations is very high.

Our review might continue, noting several other approaches to making programmatic and resource decisions for higher education. Some focus primarily on issues of education and human development, with less attention to notions of national direction or labour market composition. Others assign the highest priority to the role of higher education in developing students' moral and ethical character.

In practice, we shall most likely use a combination of approaches, seeking a reasonable balance among societal priorities, organisational needs and individual preferences. The development of our country surely involves far more than the employment or employability of our higher education graduates. However we proceed, we cannot avoid wrestling with these problems. Higher education requires a large investment for a small number of learners. We must make difficult decisions about programmes and allocations. Sometimes we will decide that the unique roles of particular programmes warrant some overlapping and duplicated activities. At other times, we will decide that we must merge similar programmes or eliminate activities we deem marginal to our highest priorities.

### **ASSESSING AND IMPROVING EDUCATION QUALITY**

If education's outcomes were tangible products like pens or chairs, quality assurance would be straightforward. We could examine the pens in great detail. Are they the desired shape, size, weight and composition? Do the parts work as intended? Does the ink have the specified colour, density, viscosity and volume? Similarly for chairs. Have the correct materials been used? Is their assembly satisfactory? Are the shape, colours, style and finish as intended? We could subject both pens and chairs to tests designed to measure their durability, longevity, even capacity to withstand misuse. We could recruit people to use the pens and sit in the chairs and report on their experiences.

But many of the desired outcomes of education, especially higher education, are not tangible like pens and chairs. Certainly, some outcomes can be measured. We can determine whether physicists can calculate acceleration, explain relativity and use quantum mechanics to characterise quarks. We can check for the acquisition of factual knowledge of all sorts, from history through engineering to theology. We can develop practical tests that show the mastery of particular skills.

Much of what we expect from education, however, is not easily measured. In part, that is because standardised examinations generally do not

assess well students' curiosity and sense of inquiry, or their ability to frame important questions, or their skill in finding and organising resources to address the intellectual and other problems they confront, or their competence in critical analysis and multidisciplinary synthesis. In part, that is because education's consequences often have long time horizons. Desirable results may not be visible until years after an education programme has been completed. In part, that is because it is difficult to distinguish between the outcomes of a particular course or programme and the consequences of schooling or education as a whole. In part, that is because we expect our education system to prepare young people for their roles as citizens, to teach them respect for others and to equip them to work cooperatively and resolve conflicts. All these are important outcomes that tests rarely measure. In part, we find it difficult to assess the quality of an educational experience because education is above all a process, not a static outcome.

Still, if we are to improve the quality of our higher education system, we must develop appropriate strategies for assessing what our institutions do and how well they do that. Our assessment strategy should be developmentally focused and inclusive, assure a prominent, generative and reflective role for the institution and the personnel being assessed, bring the higher education community into cooperative and synergistic partnerships, lead to tangible benefits for students and staff at educational institutions of all kinds, as well as for the society at large, and produce clear and useful results reasonably economically and promptly.

In countries with a larger higher education sector, it is common to find academic standards bodies staffed and managed by groups of peer institutions. A country's universities, for example, may have an accreditation and credential committee that periodically reviews each university and its major programmes. Generally undertaken by academic personnel from other institutions, those reviews note accomplishments, identify problems, suggest remedies, accord and occasionally withdraw certification. Namibia's size, however, makes that approach difficult to pursue. We simply do not have several of each type of institution to constitute that sort of arrangement. How, then, can we organise systematic assessments that include both those being reviewed and an external perspective? How can we address the limitations and often idiosyncratic nature of evaluation schemes that rely on individual external examiners? What are the appropriate standards to be used?

Our evaluation strategy is likely to have several components. First, as its capacities develop, we shall rely on appropriate arrangements established within the framework of the Namibia Qualifications Authority (discussed more fully below). Since that framework requires a higher education expert board or committee to define qualifications and relate them to specific levels of education achievement and/or work experience, we must still grapple with the small number and size of our higher education institutions. That is, we must constitute a board that will simultaneously reflect national interests, respect institutional concerns and priorities, and establish sufficient autonomy and independence to make critical judgments.

Second, to establish appropriate baselines for comparison and to institutionalise the process of regular reflection, examination and evaluation, we should develop a cycle of periodic institutional self-assessments. That is an approach used in many countries, at all levels of the education system. The core principle is that at regular intervals each institution undertakes a searching reflection and self-examination, beginning with broad goals and including current objectives and specific programmes and other activities. That is generally a phased process that is organised to permit contributions from the many perspectives and constituencies that constitute a higher education institution, including academic and other staff and students. While the focus is on self-assessment, the process provides opportunities for input from interested groups and individuals outside the institution. Commonly, institutional self-assessments are guided by a frame of reference set by the responsible ministry or other appropriate authority and draw on norms and standards used by comparable institutions elsewhere. While a self-study of this sort is undertaken within each institution, a person external to the institution generally plays an important role in helping to organise and facilitate the process. Where institutions are large, their faculties or schools or departments can also undertake periodic self-assessments. In short, the strength of this approach is that it requires each institution to evaluate itself, systematically, thoroughly, critically and openly. For that, institutions use their own criteria and methodology, which are in turn informed by a frame of reference set by the larger society and norms and standards appropriate in comparable settings.

Third, we shall as well need to work with our neighbours to develop a regional approach, drawing on both experiences and staff from other countries.

In sum, we shall need to be very imaginative and very committed to developing an evaluation strategy that combines self-study and self-assessment with external independent review, that considers an institution's own objectives, peer opinions and systematic comparisons with similar institutions, that produces results that can be used for both improvement and public accountability, and that can focus on smaller units as well as entire institutions. Most important, we shall have to integrate participatory and critical assessment into our everyday practices, as uncomfortable as that may sometimes be.

Autonomy in higher education must rest on a solid foundation of social responsibility and public accountability.

**University  
of Namibia**

## **FUNCTIONS OF A UNIVERSITY**

University education is vital to national development. Our contemporary world requires both the high-level understandings and skills and the commitment to systematic inquiry, comparison and analysis that universities develop and nurture. Both to employ ideas and technology developed elsewhere and to create our own requires a pool of scientists, medical practitioners, economists, agriculturalists, specialists in ecology and environment, teachers and others with high-level education. Namibia also needs philosophers, poets and playwrights who help us think about what we value and why and who hold up a mirror to help us see who we are and who we are becoming. As the countries of our region and the world as a whole become more interconnected, we require a work force and management who are thoroughly familiar with innovation and production elsewhere and who are competitive in the international arena. As recent studies in several countries have shown, education in general, and especially university education, is a prime engine of national growth and prosperity.

Historically, the primary aims of universities were research and teaching, or the discovery and dissemination of knowledge. For much of its history the university sought shelter and isolation to pursue those goals, leading to a pronounced detachment from its community - an "ivory tower" in the common cliché about universities. The rapid and intensive social, economic and political transformations and enormous technological advances since the industrial revolution have led to a shift of emphasis and re-ordered priorities and to new relationships between university and society. Universities everywhere have come to be expected to play a developmental role, responsive to public direction and dependent on public funding. In this setting, service to the community has come to be regarded as one of the major aims of a university.

Modern universities are indeed essential to development. Their major contribution is the production, diffusion and application of knowledge that is fundamental to human progress.

Universities are expensive to nurture and sustain. Nearly everywhere they consume a substantial portion of scarce national resources. The rationale for the existence of universities in general, and in the developing world in particular, is that they must make a difference to the human condition. It is essential for a university to respond to its country's needs. The country is entitled to expect returns that contribute to the social, economic

and cultural development and general welfare of its people. They must address the challenges posed by the search for national and cultural identity, by the problems of poverty and the need for social adjustment and the problems of economic progress.

Within this context, what are the appropriate roles for African universities? African universities must transcend their origins modeled on European universities to draw their inspiration from their environment. In the words of one analyst, an African university must be not a "transplanted tree, but [a tree] growing from a seed that is planted in African soil". Concretely, an African university must serve and be accountable to its population, most of whom are rural and poor. To achieve that, an African university must be committed to active participation in social transformation, economic modernisation and political development as well as the development of the human resources, not of a small élite, but of the entire nation.

University education, however, must not be understood solely in utilitarian terms. Science, mathematics and technology are indeed important, but their mastery must not come at the expense of understanding society or expressing insights, perspectives, hopes and visions. A university must nurture both physicists and poets, agronomists and historians. Higher education should be characterised by breadth and flexibility, equipping students to understand and cope with an unpredictable future. It must as well enable students to adapt to an evolving labour market, not only filling jobs but also creating them.

Unfortunately, after a period of initial enthusiasm and expansion, many African universities have been unable to meet these expectations. Several problems have proved to be especially burdensome. Rapidly expanding enrolments have outstripped national capacity to plan for and manage growth. High costs in settings of restricted or declining budgets have led to reductions in essential areas, including research, staff development, library and maintenance. Ineffective management has misdirected resources. In many countries, the quality of education has declined at all levels.

Overall, most African universities have experienced deteriorating facilities, reduced funds for research and staff development, low morale and high turnover among the instructional staff, and declining quality.

## **HISTORY**

Though younger than African universities created during the colonial period, the University of Namibia had a similar birth history. The Univer-

sity of Namibia is one of the successors of the Academy for Tertiary Education. Founded in 1980, the Academy followed the curriculum and syllabi of the University of South Africa until 1985. In that year, a University section of the Academy was authorised to award its own degrees, which led to some curricular changes. Following the implementation of UN Resolution 435 in 1989, the Academy issued a Statement of Intent that proposed a shift from the dominant South African paradigm of Christian Nationalist Education to a vision of Participative Education. Its intent, the Academy announced, was to promote a dialogue among political opinion makers, community leaders and educationists, to evolve an education policy responsive to the needs and desires of Namibia's people. In the context of South African rule and the struggle to end it, the stated intentions were not matched by a fundamental reconstruction of the institution. In any case, the structure and organisation of the Academy's university sector was strongly influenced by the British tradition.

Following Independence, a Presidential Commission on Higher Education made numerous recommendations for education reform and generally proposed maintaining the university's structure and organisation.

Established in August 1992 by the University of Namibia Act, the University of Namibia (UNAM) is charged to serve as a centre of higher learning and research and to train high-level specialists in critical areas necessary for national development. For the most part, UNAM adopted and inherited the British university model with its main elements: the idea of a university, the concepts of autonomy and academic freedom (which were enshrined in the Constitution [Article 21(1)(b)] and the University of Namibia Act), the academic structures and various university procedures and processes.

UNAM fully recognises that the pursuit of knowledge for its own sake is a luxury it cannot afford. The attainment of Independence and the demise of apartheid have created a need for a new and radical reorientation which must be rooted in the new realities of Namibia. At its creation, UNAM recognised the urgent need to be at the centre and not on the periphery of development, and to play, and to be seen to play, a more active and meaningful role in the development of Namibia.

One developmental role for UNAM focuses on the preparation of the high-level and highly skilled human resources Namibia requires. Development demands men and women who are thinkers and who can generate ideas. Beyond its instructional role, UNAM seeks to provide an atmos-

phere in which there is, in the words of the famous American Judge Wendell Holmes, "a free trade of ideas".

Universities must provide leadership in research. For UNAM, while basic research will always remain important, substantial emphasis should be on applied research directed towards issues that affect Namibians in their everyday lives. Universities must take a more active role in identifying, investigating and seeking solutions to development problems.

## **MISSION**

The University of Namibia's general orientation is reflected in its motto: "Education, Service, Development."

UNAM's 5 Year Development Plan, 1995-1999, specifies its mission:

- serve as a centre of higher learning and research and train high-level specialists in critical areas necessary for national development;
- provide facilities appropriate to a university characterised by -
  - high standards of excellence
  - responsiveness to the needs of the country
  - accessibility to all people, regardless of their ethnic background, gender, creed, religion, social status or physical condition;
- serve as repository for the preservation, development and articulation of Namibian values and culture through the promotion of Namibian history, values and languages;
- undertake basic and applied research, with a view to contributing to the social, economic, cultural and political development of the people of Namibia;
- encourage and promote endogenous development of science and technology in the country;
- serve both rural and urban communities, and provide extension and advisory services to the communities, with a view to uplifting their education and technical know-how;
- promote national, regional and international unity and understanding;
- promote and defend democracy, academic freedom, a culture of excellence, debate and constructive criticism, and regular self-evaluation and peer assessment; and
- safeguard and promote the principle of university autonomy, with a view to providing the appropriate atmosphere and opportunities for scholars to pursue the development of their intellectual potential to the highest level.

## **PRIORITIES**

UNAM's 5 Year Plan specifies areas for priority attention in the development of the University: improving the governance of the University; promoting a balanced output from the University system; prioritising the training programmes; strengthening staff development; addressing some of the relics of the colonial regimes; strengthening the research and consultancy capacity; strengthening linkages with ministries and with the private sector; reducing unit costs; monitoring staff performance; developing incentives for attracting and retaining talented staff; developing postgraduate programmes in disciplines with good facilities and strong staffing; strengthening the university library; strengthening student support and internship programmes; and diversifying sources of finance.

One major priority is improving the governance of the University through the development of strategic leadership. Combining risk, vision and ideas, strategic leadership is the process of setting clear organisational goals and directing the efforts of staff and others toward fulfilling organisational objectives. Strategic leadership should develop ways of procuring essential resources and inspire the entire university community to work toward achieving the University's goals. Improving governance also involves increasing management efficiency. That will be addressed by strengthening the collection, storage, manipulation and use of information, staff training, especially for administrators, and decentralising some activities.

A second major priority is to increase the emphasis on science and technology. During the period of South African rule, education and training programmes were heavily skewed toward the humanities, with correspondingly very limited attention to natural and technological sciences at school and university levels. Consequently, the majority of black students, of whom most came from poorly equipped rural schools, enrolled primarily in humanities subjects. UNAM should address that bias by introducing new subject areas and by increasing enrolments in the physical sciences, technology, natural resources and agriculture.

To address national and institutional priorities, the University will rationalise its activities by moving rapidly to phase out inherited but now unnecessary activities in order to reduce unit costs and free resources for other uses.

## **ACADEMIC STRUCTURE**

Currently, the University of Namibia has seven faculties: Agriculture, Economics and Management Science, Education, Humanities and Social Sciences, Law, Medical and Health Sciences and Science.

The Centre for External Studies provides tertiary-level outreach programmes, including distance learning courses and special courses, lectures, seminars and workshops at several sites, with particular attention to teacher education. Formerly, the Centre for External Studies also offered national diploma programmes on behalf of the Polytechnic of Namibia.

To serve government and private sector needs, new training centres have been established. The Centre for Public Service Training in the Faculty of Economics and Management Science offers short in-service training courses in management and finance for public administrators. The Justice Training Centre in the newly established Faculty of Law aims to upgrade the skills and competence of legal personnel, for example, magistrates. The Professional Legal Training Programme provides intensive in-service courses for lawyers who have completed their original training in other countries, especially during the anti-apartheid struggle, and who wish to practise law in Namibia.

## **RESEARCH AND CONSULTANCY**

*Toward Education For All* stresses that our national university is the keystone institution in our education system. As such it plays a central role in educating our senior educators and curriculum developers. It also undertakes and coordinates research designed to help us understand, evaluate and improve our education system. Our national university must also be a beacon of learning. In its teaching and research it must value discovery, exploration and understanding. It must be willing to address difficult issues and ask unpopular questions, systematically, thoroughly and persistently. It must insist that its learners, novices as well as experts, present their analyses and understandings in ways that are comprehensive and useful to both specialists and general audiences.

Prior to Independence, research and development activities were controlled from South Africa. Namibia now needs to develop and execute its own research programmes. For that, UNAM should play a leading role. To promote multidisciplinary research activities and programmes, the University has established a Multi-disciplinary Research Centre. The newly es-

tablished Human Rights Documentation Centre in the Faculty of Law, whose major focus is to promote a democratic culture in the country, is also helping to bring research findings to the community through public meetings, seminars and conferences.

Namibia's history of limited and segregated education permitted very few black Namibians to develop advanced research skills and experience. Redressing years of discrimination will require positive action to expand the pool of researchers, beginning with those early in their academic careers. Continuing staff development opportunities will also be essential.

### **STAFF RECRUITMENT AND DEVELOPMENT**

The few Namibians with advanced academic degrees and university experience are widely in demand, both within and outside the country. Staffing the University of Namibia, especially as it grows to meet increasing demand, will prove very difficult for years to come. At the end of 1996, 61% of the University's academic staff were Namibian.

That salaries and terms of service are often more attractive in other posts compounds this problem. Currently, its terms of service sorely limit UNAM's ability to attract a sufficient number of qualified Namibians. Of the appointments made during the first six months of 1996, 43% were Namibians and 57% were expatriates.

UNAM has recently instituted a staff development programme, whose priority attention to young Namibian academic and administrative staff will assist us in attaining national self-reliance in high-level human resources. UNAM's staff development programme has four major objectives:

- to create a pool of well-qualified staff, both academic and administrative, for the various sectors of the university;
- to correct the present historical imbalance in the University's staffing pattern between the races and sexes in the country;
- to create urgently, through further training, attachment, understudy and other relevant experiences, opportunities for Namibians who have been historically disadvantaged to attain positions of responsibility and influence within the University; and
- to identify potential academic staff from among the undergraduates of UNAM or other Universities, as well as from other sectors in the country.

### **INTERNATIONAL LINKAGES**

The University of Namibia strives to promote linkage with other universities in an attempt to foster the exchange of expertise, for example through sharing external examiners, students, staff, publications and information in general. Linkages of this sort serve to ensure capacity building through staff exchanges; exposure and enhancement of leadership qualities through student exchanges; development of a research and publication culture through joint research and authorship; and establishment and reinforcement of UNAM's international recognition, academic credibility and reputation through formal networks with sister universities throughout the world.

Those linkages include arrangements with universities within and outside Africa through UNITWIN, a UNESCO programme for networking, transfer of knowledge and establishment of centres for advanced studies and research. UNAM's recently opened Faculty of Agriculture and Natural Resources, for example, is already closely linked with other agriculture faculties in southern Africa through SACCAR based in Gaborone, Botswana. As part of the UNESCO sponsored UNITWIN network between UNAM and regional universities, the University of Namibia recently established a UNESCO Chair on Democracy and Human Rights, which will foster sharing among the participating universities the results of research on democracy and human rights.

UNAM also has several direct cooperation agreements with universities in Africa, Europe and the United States, and with the United Nations University in Tokyo. Those relationships help to reinforce UNAM's capacity in teaching, research and management.

### **STRENGTHENING THE UNIVERSITY LIBRARY**

High-quality research and instruction in higher education require a high-quality library. As well, a library with rich and diverse holdings is one of the most cost-effective ways of supporting overall human resources development. Unfortunately, the library inherited from the former Academy was grossly inadequate. UNAM is currently considering strategies for strengthening the university library, including the establishment of the Human Resources Development Project. A major component of that project is the development of an Information and Instructional Resource Centre to be equipped with modern information technology that will enable people throughout Namibia to access its resources. Existing technology already enables

the library to consult information resource centres throughout the world. A second project component focuses on training information professionals and users.

## **COSTS AND FINANCE**

A young institution, the University of Namibia is still in its early phase of development. Consequently, it must simultaneously maintain and improve programmes inherited from its predecessor institutions, consolidate and rationalise existing courses of study and related activities to make most effective use of available resources, where appropriate, create new programmes to address the broad agenda reflected in the national and university development plans, and provide high-quality service to its on-campus and off-campus constituencies.

Government is currently the major source of funding for the University of Namibia (90% of total funding, and nearly 95% with the inclusion of government bursaries and loans), and will continue to play that role for the foreseeable future. While there is a strong case to be made for increased budgetary allocation to UNAM, the University will endeavour to raise funds from the private sector and international funding agencies. The University is also striving to promote cost-effectiveness, rational budgeting, efficient administration, accountability and careful control and maintenance of its assets.

By any measure, allocations to the University of Namibia reflect a major commitment of national resources. With the inclusion of capital and development expenditures and bursaries and loans to university students, our annual national direct commitment to the University currently reaches or exceeds N\$100 000 000. For a student population of some 3 500, our national average direct yearly expenditure per University of Namibia student is about N\$29 000. Since that is far more than we spend on students at other levels in our education system, we must be sure that those funds are well used and that they generate substantial value for the society as well as for the individual.

Within the University of Namibia, the yearly per student expenditures vary widely. In some faculties, it may require a far higher outlay of public funds to educate a student at the University of Namibia than it would cost to send the same student to a university in another country. That does not mean that we should close all high-cost programmes or that whenever it seems less expensive we should send students to universities elsewhere.

Our national interests and long-term objectives require that we create and maintain some costly programmes, even when careful analysis indicates that in the shorter term our per unit student expenditures are higher than other alternatives. At the same time, we must regularly ask ourselves: Do we as a country benefit from those higher expenditures? And we must also ask: What can we do to reduce the expenditure per student at the university without reducing the quality of education or the national value of the institution? Under what circumstances does it make sense to send students to universities in other countries, especially in our region, rather than developing costly programmes at UNAM?

The University of Namibia is pursuing several strategies to contain its expenditures and use its funds most effectively. The starting point is a long-term planning approach that identifies specific roles for each higher education institution closely matched to government plans. Within that framework, an annual iterative process can fine-tune objectives and resource requirements in a constructive forum that includes government and the higher education institutions.

To this end, the University has been collaborating with other institutions in southern Africa, with support from the Ford Foundation, to develop a long-term planning model for higher education institutions. The model is currently being customised for UNAM's specific case.

## **COST-EFFECTIVENESS**

The University recognises the crucial importance of maximising the cost-effectiveness of the higher education sector, and within that sector, of individual institutions. UNAM's efforts to promote cost-effectiveness have three major components.

First, the University is working to enhance the effectiveness of its programmes. The key concerns are the relevance, quality and quantity of those who complete University courses and enter the world of work. The University is committed to strengthening its dialogue with the Ministry of Higher Education, Vocational Training, Science and Technology, other ministries and departments and the private sector to develop a productive array of relevant programmes and to shape the mix of students who study at the University.

The University is also working to strengthen its pool of entering students by collaborating with a broad range of partner institutions and agencies to improve the quality and effectiveness of the secondary system. For exam-

ple, the University has played a role in professional upgrading for secondary school teachers. It has also piloted bridging courses for science students and provided other academic support for students whose weak secondary school background is a serious handicap at the university level.

The University considers that an adequate and equitable system of financial support for students is critical to enabling them to pursue their studies successfully. That support is especially important for students from previously disadvantaged communities or with very limited family income. The new Government Student Financial Assistance Scheme will address the major problems in this crucial area (that scheme is discussed more fully below). At the same time, it is essential to continue to explore with the private sector new approaches to student funding, including combined work and study and sandwich programmes to spread student costs and permit income-earning activities during study periods.

Reducing costs is the second component of the University's strategy for improving cost-effectiveness. The establishment of the Polytechnic of Namibia as an independent institution combined with a radical review of the University's administrative structures resulted in a reduction of 40 posts - approaching 20% - in UNAM's administration. Alternative modes of learning, including distance education and part-time education can also reduce costs to both individual learners and the government. The University expects these modes to expand more rapidly than conventional full-time and predominantly immediate post-secondary education. These developments will require investment in the short term for learning materials, special facilities and staff development. A change in academic approach from teacher-led to more student-centred learning may result in reduced unit costs of teaching in the long term.

Diversifying income is the third component of the University's strategy for improving cost-effectiveness. The University expects to pursue two parallel approaches in this regard. The first is to increase the fees paid directly by students and their families to 25% of the cost of their education. The second involves working energetically to increase income from the private sector. It has successfully obtained significant sponsorships and project funding and considers there is scope for substantial expansion.

These contributions ought to be viewed strategically as arising out of a policy toward private sector partnership that encompasses a broad range of collaborative activities, including involvement in curriculum and staff

development, joint projects and academic programmes, and specific research, training and consultancy.

The University plans to increase its contribution from the private sector and international organisations to 1-2% over the short term (2-3 years), with an ultimate aim of reaching 5%. With students providing 25% of the cost of their education, the government share should fall to 70% of total expenditures.

### **FUNDING FORMULA**

Allocations to the University have generally been determined through annual consultations with the Ministry of Higher Education, Vocational Training, Science and Technology, guided by funding levels in previous years. As noted in the general discussion of financing higher education, it is timely to integrate the yearly discussions of each institution's unique circumstances into a broader funding formula for higher education.

The University envisions using a similar approach within the institution. Faculties, departments, offices and centres will need to relate their budget requests to student numbers, unit costs, inflation forecasts and expected efficiency gains, and to project other sources of income, including student fees and contributions from the private sector and other organisations.

**Polytechnic  
of Namibia**

## **CAREER-ORIENTED TERTIARY EDUCATION**

The polytechnic (termed *technikon* elsewhere in southern Africa) model - vocationally oriented higher education institutions that emphasise technology and science, with responsibilities, status, prestige and attractiveness to students comparable to those of universities - has a rich and distinguished history and has flourished in several European countries (especially Germany, Austria, Switzerland and some parts of Eastern Europe). That model requires either substantial public recognition for non-university professional training, with commensurate salaries, or non-university institutions with the status of universities, or perhaps both.

Notwithstanding the success of this model in those settings, in most countries polytechnics and *technikons* seem to have a distinctly inferior status compared to universities. Indeed, in many countries what were formerly polytechnics or *technikons* have become universities. As well, universities have increasingly assumed responsibility for technical and technological education. Where universities have higher status and similar programmes, not surprisingly students prefer to study, say, civil engineering, or to seek certification as laboratory technicians at universities rather than polytechnics or *technikons*.

This trend seems especially clear in Africa. Notwithstanding what seem to be the obvious advantages to African countries of the polytechnic model, higher education has come to be equated with universities.

The pervasiveness of this view suggests that the Polytechnic of Namibia must work assiduously to develop, implement and revise programmes that serve, and are seen to serve, both national and individual interests. To ensure that it is respected in its own right, rather than perceived as a low-status institution for those who are not admitted to the University, the Polytechnic must manifest academic imagination and leadership in partnership with other institutions in our society that value its programmes and graduates.

## **HISTORY**

With its mandate formally specified in the Polytechnic of Namibia Act, 1994, the Polytechnic of Namibia, like the University of Namibia, grew out of the former Academy for Tertiary Education. Amalgamating *Technikon* Namibia and the College for Out of School Training, the Polytechnic is charged to develop and manage career-oriented tertiary education.

Its founding Act specifies the principal responsibilities of the Polytechnic of Namibia:

- post-secondary career education;
- continuing education at the post-secondary level;
- applied research;
- equal opportunities; and
- effective collegial governance.

## **MISSION AND VISION**

The Polytechnic of Namibia contributes to Namibian development by providing tertiary technological career-oriented education at internationally recognised standards. The main objective of its curricula is thus the practice, promotion and transfer of technology.

It is important, therefore, to distinguish between the technological career-oriented education that is the mission of the Polytechnic and technical and vocational training, which is provided at pre-tertiary level by Vocational Training Centres.

It is important as well to recognise that while the Polytechnic of Namibia and the University of Namibia have separate and distinct missions and responsibilities, in practice their education initiatives and the interests of their clienteles sometimes overlap. Where that occurs, Namibia is best served not by formal boundaries and high fences but rather by connecting paths and shared enterprises. Over time, as the two institutions develop their own strengths, it should be possible for students at each institution to draw on the expertise, experience and facilities of the other.

Instructional programmes at the Polytechnic are aimed at meeting the needs of industry, understood as the driving force of the Namibian economy. During the course of their study students are exposed to technological knowledge, skills, values and attitudes. Within a climate conducive to intellectual and social development, the focus is on the principles and approaches required for entering and succeeding in industrial occupations and technological careers. Emphasised are the application - and more important, the ability to apply - of the practical outcomes of scientific principles in ways that render them useful to particular technological and industrial settings.

As it emphasises the transfer of technology, the Polytechnic addresses the professional human resource requirements of the country, the region, and beyond. To this end, the Polytechnic strives to -

- lead students to maturity to assume their economic and social responsibilities, including developing a sense of responsibility, a problem-solving approach, integrity and a humane attitude toward others;
- enable students both to acquire knowledge and to develop the skill of applying that knowledge in practical settings, a skill likely to be even more important in the future as job requirements change and individuals change jobs and career paths;
- prepare students for careers or professions by drawing on existing knowledge, technology and research results in close cooperation with those involved in particular careers or professions;
- be a centre of higher learning and train high-level specialists in areas necessary for national development;
- provide facilities appropriate to an academic institution of the highest quality, available to all people likely to benefit from them regardless of race, colour, gender, ethnic origin, religion, creed, social and economic status and physical condition;
- promote the establishment of funding schemes in order to assist students who cannot afford course fees at the Polytechnic of Namibia;
- safeguard and promote the principle of academic autonomy, in order to provide the appropriate atmosphere and opportunities for scholars to pursue the development of their highest intellectual potential;
- serve as a repository for the preservation, development and articulation of Namibian values and culture;
- undertake basic and applied research that will contribute to the social, economic, cultural and political development of Namibia;
- encourage the advancement of science, technology and development;
- serve both urban and rural communities, including providing extension services throughout the country to contribute to the improved function of the education system as a whole;
- promote national and international unity and understanding; and
- promote and defend a culture of excellence in the international community by encouraging criticism and engaging in regular self-evaluation and peer assessment.

A significant part of the Polytechnic's instructional programmes is, therefore, putting into practice the existing knowledge, technology and scientific results, and the formulation of the practice of particular segments of industry. Fostering technological thinking is a core focus of the Polytechnic's activities and thereby a defining characteristic of its students.

In 1997 the Polytechnic embarked on engineering courses - civil, electrical, electronic and mechanical - and has obtained state of the art equipment in the fields of computer and engineering education. It is now proceeding toward the development of Bachelor of Technology degree programmes expected to be implemented in the year 2000.

## **ACADEMIC STRUCTURE AND CURRICULUM**

The Polytechnic's governing structures include the Council, its supreme policy-making body, the Senate, which is responsible for its academic component, the Rector, its chief academic and administrative officer, and a Students Representative Council.

Currently, the Polytechnic has three Schools (faculties) of differing sizes: School of Commerce and Management, School of Communication and Legal Training, and School of Engineering and Applied Sciences.

The Polytechnic enrolls about 3 600 students, of whom more than one third are distance education students. Nearly one sixth of the student population is residential.

Currently, the Polytechnic's facilities are being used to their maximum capacity. Of the 4 000 new applications received annually, only slightly more than 800 students - fewer than 25% of those seeking admission - can be accepted.

Hence, the Polytechnic is actively developing strategies to address the demands on its facilities and is looking for new sites to permit expansion. As enrolment increases further stress campus facilities, the Polytechnic may consider establishing satellite campuses. That could support several of the institution's objectives, including enhancing literacy and community development.

Several paths lead to the Polytechnic, including academic preparation and continuing professional development in several areas. Committed to this diversity, the Polytechnic recognises the need for multiple entry points. Currently, the Polytechnic offers National Certificates (1 year), National Higher Certificates (2 years) and Diplomas (3 year programmes) in a variety of fields and professions. Historically, these qualifications, like tuition fees, matched those in South Africa, but revisions in progress re-orient courses and fees to suit Namibia's needs and circumstances. The Polytechnic also offers short courses and workshops for its staff and, according to need, for the public and private sectors and non-governmental agencies.

New course offerings, especially in engineering and health, will diversify the Polytechnic's curriculum. Although national growth trends clearly show engineering and natural science to be priority areas, currently no other Namibian institution provides engineering education. Consequently, both public and private sectors rely heavily on foreign consultancies. With that in mind, the Polytechnic will make engineering a principal developmental focus. Other areas for curricular development will include medical technology, public health, design technology, mass communication, hospitality management and tourism. Overall, the new curriculum will be standardised to include and emphasise science, technology and entrepreneurship.

The Polytechnic is also responsible for preparing vocational training instructors, including institutional trainers, trainers in industry and mass skills facilitators.

The Polytechnic will foster applied faculty and student research in collaboration with development agencies, government departments, public interest groups and the private sector. Faculty and students will be encouraged to present papers in regional and international conferences.

By bringing its curriculum into the mainstream of global economic development driven by technology and industry, the Polytechnic will strengthen the qualifications and marketability of its graduates, who must be competitive, well-balanced and independent thinkers, with skills enabling them to be mobile nationally and internationally. Hence, the Polytechnic will work toward international recognition.

Integrated into its courses, practical training and in-service training are the Polytechnic's unique contribution to higher education. As well, that attention to on-the-job experience underlines the productive relationship between the Polytechnic and industry. That relationship, in turn, enhances the readiness of the Polytechnic's students, with tangible skills and experience, to enter the job market. To maintain that relationship, the Polytechnic remains sensitive to industry's requirements and continues to validate its standards with industry and other academic institutions.

## **OUTREACH**

From a very early stage in its predecessor institution, the Polytechnic has sought to extend its instruction beyond its campus. The former Academy for Tertiary Education's Distance Teaching Department offered both Technikon (Polytechnic) and University courses. Initially those courses

were either developed by the University of South Africa (UNISA) or closely modeled on UNISA's correspondence courses. Primarily an administrative unit, that Department exercised no pedagogical control over its academic programme. At the transition to Namibia's new structure of higher education, that Department became the Centre for External Studies (CES), attached to the University of Namibia, with specific academic, professional and pedagogic responsibilities. Its primary mission is to address the education needs of people who cannot study directly at the University or Polytechnic, and especially those from formerly disadvantaged communities.

In 1996 the Polytechnic delinked its distance education activities from the CES and the University of Namibia and established its own Distance Education Centre (DEC). Currently, the DEC functions as an administrative unit that receives academic and professional support from various schools and departments.

The future development of the DEC will be guided by the broader decisions about distance and open learning, discussed more fully below. If higher education institutions are to maintain their own distance learning units, the DEC will be expanded and reorganised to become responsible for the pedagogical design, delivery and management of the courses it offers. Their academic content and standards will remain the responsibility of the relevant schools and departments. Alternatively, a single distance education and open learning agency may be organised to serve the programmatic needs of all tertiary institutions, including the Polytechnic.

Whatever the institutional framework, in the medium to long term the Polytechnic expects to offer a wide range of undergraduate courses through external studies or open learning and distance education. Over time it should be possible for practising professionals to complete an entire Polytechnic course of study, even to degree level, through distance and open learning methods.

The Polytechnic pursues several other outreach strategies. It will institute a Careers Day, intended to enable students to understand better the job market and employers to diversify their recruitment pool. The Polytechnic is also developing an academic outreach, focused on linking secondary and tertiary levels of education and formal and non-formal sectors. Its contribution in this regard will be to provide advice on curriculum development in primary and secondary schools, especially in science and mathematics.

The Polytechnic facilitates a Lecture and Recital series, open to the general public. Presentations by scholars, diplomats, faculty and students strengthen links with local and international communities.

The Polytechnic expects to establish an exchange programme with similar institutions in other countries. To facilitate that, it is essential to assess the equivalence of the Polytechnic's qualifications. This will increase the opportunities for our most advanced students.

The Polytechnic has established professional memberships in regional and international organisations and associations, for example the Commonwealth Association of Polytechnics in Africa and the Committee of Technikon Principals, with particular interest in science and technology.

In order to create an atmosphere of leadership and excellence, the Polytechnic will introduce a publications series oriented toward facilitating community and linkages to Namibian society.

The Polytechnic has expanded its access to the information superhighway and mass communication. This will enable its students, faculty, and staff to have rapid and reliable connections to colleagues, organisations, libraries and other resources throughout the world.

## **FUNDING**

Maintaining the pattern of its predecessors, the Polytechnic receives the bulk of its funds from Government for salaries, other recurrent and capital expenditures. Student tuition and fees constitute a second significant source of income. Currently, many full-time students receive government bursaries. A third source, funds dedicated to particular projects, provides limited additional income. At its creation, the Polytechnic had no endowment or investment portfolio.

Facilities and services required for the foreseeable future will require substantial funding from the Government and other sources.

Total dependence on government funding inhibits institutional growth. Thus it is essential for the Polytechnic to mount a fund-raising campaign, seeking funds from commerce, industry, financial institutions, external funding and technical assistance agencies and other partners in its strategic and developmental efforts. For that, the Polytechnic will actively pursue the establishment of partnerships with the private sector and will emphasise contributions as social investments rather than charity. The Polytechnic also realises the need to use its own facilities to secure funding.

## **COORDINATION AND COOPERATION**

The Polytechnic of Namibia and the University of Namibia have emerged from their common predecessor as sister institutions with parallel, occasionally overlapping, but distinct missions. To achieve its goals, the Polytechnic must develop its own sense of purpose and direction, well linked to Namibia's national development strategy. Only then will it be able to transform the unfortunate public perception of the Polytechnic as a second-tier university.

Accordingly, the Polytechnic of Namibia will distinguish itself more clearly from the University of Namibia and will highlight its technological specialisations and expertise and its practical, career orientation. That will in turn facilitate increasing cooperation between the two institutions and reducing the overlap and duplication of courses.

As higher education institutions, the University of Namibia and the Polytechnic of Namibia should consult regularly, both formally and informally. It is important to explore promptly, for example, common curriculum interests between the two institutions as well as the circumstances in which each would grant credit for studies completed at the other institution. That could enable students to pursue advanced courses in either or both institutions.

## **Teacher Education**

## **TEACHER EDUCATION IN NAMIBIA**

The quality, efficiency and effectiveness of our schools depend to a large extent on the nature and success of our teacher education programmes. To ignore or neglect the role of teacher education is to ignore and neglect the intellectual future of our country. Unless we succeed in recruiting into teacher education and then into our schools women and men of intelligence, spirit, good character, capacity for leadership and devotion to human service, very little can be expected of our education system.

We came to independence with several different systems for preparing our teachers. Within the country, teacher education was inadequate in both quality and quantity. It surely could not support our commitment to Education For All. Several initiatives begun outside the country permitted us to develop new approaches to teacher education but were necessarily limited in the number of teachers they could accommodate. One of our major achievements since that era has been the development of a new system for basic teacher education. Still, we find ourselves with several teacher education programmes that are not yet as well coordinated and integrated as our circumstances require.

While we have begun to remedy our severe shortage of teachers, we have too few teachers in some areas and subjects to meet the needs of our expanding education system. And far too many of our current teachers have not had adequate preparation for the tasks we assign to them. We also face critical shortages among education managers and other managerial and administrative personnel. For example, while we expect our education managers and teachers to have completed Grade 12 plus an additional three years of education, 69% of our education managers and 84% of our teachers do not meet those requirements.

Unfortunately, we cannot eliminate our shortage of well-prepared teachers very quickly, perhaps not until the next century. As a result, educating new teachers and enabling our current teachers to upgrade their skills will strain the capacity of our teacher education programmes. At the same time, we also have too few qualified teacher educators. All of that means that we shall have to expand and upgrade our teacher education system simultaneously. As we do so, we shall need corresponding increases in the numbers and skills of our teacher educators.

The challenge is even more daunting. Not only must we recruit new teachers and upgrade the skills of those currently serving, but we must also

help them learn to use those skills in radically changed settings. For Education for All to become a reality, teachers must develop new visions, new understandings and new commitments. Curriculum content, medium of instruction, classroom practices, assessment and evaluation - all these are being rethought and revised.

Effective learning is more than simply gathering and memorising information. Learners must become skilled at using information not only in school or other education programmes but throughout their lives, often in ways that were not anticipated during their schooling. They must as well become skilled in determining what information they need to address a particular problem and in gathering that information. That sets high expectations for our teachers. Effective learning requires teachers who are not only competent in their subjects but who can also respond creatively to new situations. For Namibia to change, so must its schools. And for its schools to change, teachers must themselves be both agents and facilitators of change.

Reforming teacher education is essential but in itself insufficient. We must also create appropriate conditions for professional practice that encourage teachers to use their skills and to remain in the schools. If the content of teacher education cannot be used in the workplace of the teacher, then colleges of education and the University of Namibia Faculty of Education should be viewed as out of touch. It is crucial that new directions in teacher education be embedded in, and consonant with, equally innovative directions in school renewal. Major reforms in one cannot occur without concurrent major reforms in the other.

Teacher education institutions, including the colleges of education and the Faculty of Education, as the development arm of the profession, must work with teachers, administrators, school boards and parliamentarians, as well as regional councillors, to discover new ways to create the conditions for effective and rewarding professional practice as well as professional study. Central to a new design of teacher education and preparation for our future is recognition that the various teacher education institutions, pre-service and in-service education and the schools are all interrelated components of a single education system. Thus, we must replace our present disconnected approach with a new partnership that fosters educational improvement and teacher education at all levels. Resources, both financial and personal, must be directed towards strategies that link schools seeking to change with all of our teacher education institutions so that together we can break out of obsolete patterns of teacher preparation.

This partnership must also include our communities. Effective schools will involve their communities in all of their activities, which implies that teachers and other school staff need to develop skills for more fruitful interaction and collaboration with the community.

Hence, we must move in several directions at the same time. We must help our current teachers improve both content and pedagogical skills and as they do so, their motivation, their self reliance and their sense of self-competence. We must expand and improve our programmes to prepare new teachers at all levels. Especially, we must be sure that our pre-service teacher education incorporates and helps develop the learner-centred approach we are adopting throughout the education system. We must educate prospective teachers for their demanding roles in basic and senior secondary education, assisting them to become very competent at both what they teach and how they teach it. And to ensure that teachers are appropriately motivated and adequately rewarded, we must continue to review critically and improve both the career structure of the teaching profession and our system of accreditation. Let us consider each of those challenges.

### **PRE-SERVICE TEACHER EDUCATION**

We inherited a fragmented and uneven system of teacher education. Teachers serving under the different administrations did not follow the same preparation path. The various teacher education programmes had different entry requirements, scope, duration, organisation and focus. Some were very resource-intensive, developed extended competencies and provided relatively high-level qualifications. Others were far more rudimentary, providing minimal qualifications. Some emphasised classroom study at the expense of professionalisation.

While we have made great progress in developing a coherent programme to prepare teachers for basic education, responsibility for teacher education in Namibia continues to be shared among several institutions. Colleges of education offer the Basic Education Teaching Diploma and prepare the largest number of teachers entering our schools. The University of Namibia offers several teacher education programmes, primarily focused on senior secondary teachers and education planners and administrators, including a Bachelor of Education, a Postgraduate Diploma in Education, a Master of Education and a Specialised Diploma in Special Education (these programmes are described more fully below).

Administrative responsibilities are also organised in what are sometimes very confusing ways. Quite simply, our education system cannot be neatly divided between two education ministries. For example, while the colleges of education and thus the preparation of our basic education teachers are the responsibility of the Ministry of Higher Education, Vocational Training, Science and Technology, those teachers will work with schools, learners and curriculum that are the responsibility of the Ministry of Basic Education and Culture. To facilitate coordination, MHEVTST has delegated curriculum responsibility for basic teacher education to the National Institute for Educational Development (NIED), which is attached to the Ministry of Basic Education and Culture.

In practice, NIED, the colleges of education and the University's Faculty of Education have evolved overlapping but not entirely congruent approaches to preparing our teachers. At times, that arrangement may foster experimentation and innovation as the teacher education institutions pursue their own sense of what is important and how to achieve it. Often, however, the current level of coordination generates frustration among all involved.

### **PREPARING TEACHERS FOR BASIC EDUCATION**

We are committed to providing basic education for all Namibians. Although it may take us some time to achieve that goal, we must be sure that we are laying a solid foundation. Basic education is learner-centred education, which requires interactive teaching and learning. Our expectations for the teaching profession in basic education are such that simply restructuring the teacher education programmes we inherited at independence cannot be adequate. The new situation requires a new approach. Hence, we have introduced the Basic Education Teacher Diploma (BETD).

The mission of basic teacher education is to develop competent, fully qualified and committed teachers who will provide to Namibia's learners education that is equitable, relevant, meaningful and of high quality in a stimulating and supportive atmosphere. Teacher preparation for basic education must first and foremost meet the needs for professionalisation of the teacher - a person who has commitment, a sense of responsibility and knowledge and skills that will raise the quality of education in the entire country.

The BETD is a unified general preparation for all teachers in basic education, combining a common core with opportunities for specialising in

particular phases or levels of schooling and subject areas. Professional studies are both a separate component throughout the programme and integrated into subject studies. Theory and practice are also integrated in all subjects throughout the programme. Exposure to school and classroom experiences is an important component of the programme, designed to integrate professional and subject studies and theory and practice in the school setting. Thus, the BETD seeks to strike a balance between professional insight and skills and subject knowledge. We must find ways to help our teachers understand better the learning process and their roles in it. At the same time, we must be sure that our teachers develop appropriate, relevant and up-to-date subject expertise. Neither creative pedagogy nor extensive subject knowledge alone will serve our needs. Our teachers must master both.

Our basic teacher education is based on a democratic pedagogy, a methodology that promotes learning through understanding and practice directed toward empowering people to shape the conditions of their own lives. As such, it relates closely to the curriculum intentions of basic education and to the context of schools in our society.

Basic education in Namibia, and therefore teacher education for basic education, is based on learner-centred principles. Central to these is the view that knowledge is not a static amount of content, but rather what learners actively construct and create from experience and interaction within their socio-cultural context. Teaching and learning in basic education continually build on children's experience and active participation, aiming to make learning relevant and meaningful to every child.

The central focus of basic education is thus on the learner's needs, potential and abilities. Learner-centred education presupposes that teachers have a holistic view of the learner, valuing the learner's life experience as a starting point for their studies. Teachers must therefore have sufficient knowledge and skills to be able to interpret syllabi and subject content in terms of the aims and objectives of basic education and to relate these to the learner. Teachers should be able to select content and methods on the basis of a shared analysis of the learner's needs, use local and natural resources as an alternative or supplement to ready-made study materials, and thus develop their own and the learner's creativity. A learner-centred approach demands a high degree of learner participation, contribution and production.

Teachers are key to the development of our country and are important resources to their communities. It is therefore essential that teachers maintain close contact with their communities and assist learners in integrating school and life outside the school.

Teacher preparation for basic education is not seen as the final stage of formal education, nor as the completion of teacher education. The rapidly increasing and changing state of knowledge, and the new demands that are made on the role and functions of the teacher, make it impossible to regard initial teacher education as an isolated part of a career. Rather, it provides a selection of knowledge and experience as the first entry into the teaching profession, an initial step in an ongoing process of professional growth and development.

Accordingly, basic teacher education strives to -

- develop teachers who respect and foster the values of our Constitution, contribute to nation building and respond positively to the changing needs of Namibian society;
- develop understanding and respect for diverse cultural values and beliefs, especially those of the Namibian people;
- enhance respect for human dignity, sensitivity and commitment to the needs of learners;
- develop a reflective attitude and creative, analytical and critical thinking;
- develop the ability to participate actively in collaborative decision making;
- develop social responsibility towards learners, colleagues, the community and the nation as a whole;
- promote gender awareness and equity to enable all Namibians to participate fully in all spheres of society;
- enable the teacher to promote environmental awareness and sustainable management of natural resources in the school and community;
- develop awareness of the varying roles and functions of a teacher and a commitment to the teaching profession;
- develop an understanding of learning as an interactive, shared and productive process;
- enable teachers to meet the needs and abilities of the individual learner through organisation, management and assessment of teaching and learning processes;
- prepare teachers to strengthen the partnership between school and community;

- develop adequate command of English and another language of Namibia to be able to use them as media of instruction;
- prepare teachers to be able to develop and use the creative and expressive abilities and skills of the learners;
- develop the ability to create learning opportunities which will enable learners to explore different ways of knowing and develop the whole range of their thinking abilities;
- equip teachers with sufficient breadth in curriculum content and depth in selected subject areas to be able to identify and select basic knowledge content for learners and to organise and sequence content and learning situations appropriately;
- enable teachers to understand and utilise current knowledge of children's intellectual, emotional, social, physical, aesthetic, moral and spiritual development;
- develop a positive attitude toward individual differences and enable teachers to utilise them to meet social and individual needs; and
- enable teachers to take responsibility for their own learning and to be aware of ways to develop themselves professionally, both through their own initiatives as well as through formal education opportunities.

The first two terms of the Basic Education Teacher Diploma provide a common foundation, with emphasis on children's educational and developmental needs, education theory and practice, and the classroom situation. During the following seven terms, prospective teachers continue their common foundation and begin to specialise in either Grades 1-7 or Grades 5-10. Those who focus on the lower grades emphasise early childhood education, curriculum and English communication skills. Those who focus on the upper grades have a common core and a particular emphasis on English plus humanities, or mathematics and sciences, or pre-vocational preparation. Prospective teachers spend part of their time each year working directly in schools. Both directly and in simulations, student teachers experience the learning processes they will subsequently develop for young learners in basic education.

One of the demands of basic education in Namibia, and thus the Basic Education Teacher Diploma, is to develop and refine a system of assessment and evaluation that is consistent with the stated principles of learner-centred, interactive teaching and learning: learning by understanding and learning through productive activities and cooperation. A principle of positive achievement will be used to assess what the prospective teachers

know, understand and can do. This principle entails that a variety of assessment techniques be used and that counselling, tutoring and other remedial assistance become an integral part of assessment procedures. The purpose is to provide conditions for our new teachers to succeed rather than to concentrate on weeding out failures.

### ***IN-SERVICE BASIC TEACHER EDUCATION***

As of 1997, the Ministry of Basic Education and Culture classified 4 000 of Namibia's teachers as "trainee teachers", that is individuals whose academic background and professional training do not make them fully-qualified teachers. Over time we expect the minimum academic qualifications for our basic education teachers to rise. Hence, our education system requires an effective programme of in-service education to enable our serving teachers to improve their skills and upgrade their status.

Indeed, our needs in this area are much broader. Especially for teachers, learning is a lifelong activity. The process of creating knowledge does not stand still! All subject areas regularly revise, sometimes discard, old understandings and generate both new information and new approaches and methodologies. Through formal and informal observation and research we understand better the learning process and particularly the needs and experiences of Namibian learners. Teaching itself generates knowledge about the utility and effectiveness of particular instructional strategies. Thus, all teachers, whatever their current qualifications, need opportunities for further education.

The demand for continuing teacher education is of several sorts. Teachers who are currently not fully qualified seek to upgrade their credentials. Qualified teachers wish to extend their education and thereby become eligible for additional responsibilities and higher-level positions. All teachers need to remain abreast of recent developments in pedagogy and their subject specialisations. And our national education system needs ways to inform teachers about new and revised objectives and programmes and to involve teachers in their conception and development.

Meeting this broad cluster of needs will require the combined efforts of several institutions. In part, we shall rely on major programmes created and managed by the education ministries. The Ministry of Basic Education and Culture, for example, offers a BETD In-service Programme and is developing an Instructional Skills Certificate Programme. In part, our teachers will find appropriate opportunities for further education through dis-

tance learning programmes, for example those managed by the Namibian College of Open Learning and the University of Namibia's Centre for External Studies. Over time it is essential that our primary teacher education institutions, the colleges of education, play a greater role in this arena.

As well, it seems likely that some, perhaps many, of our teachers will continue their studies by enrolling in private and other non-governmental institutions, both within and outside Namibia, either for residential or for distance courses. While studies in these institutions will help us address our needs for continuing education for teachers, they pose two major challenges. First, we shall have to be sure that instruction and learning in these institutions meet the quality and content standards we have established for our teachers. For that, we expect to rely heavily on our national accreditation system and on the vigilant monitoring and supportive counselling of the education ministries, our teacher education institutions and teachers' organisations. And second, we shall need to find ways to be sure that teachers who study in non-governmental institutions, especially those outside Namibia, master the ideas and practices of our educational philosophy and their implementation in our national education system. As regional sharing and exchanges improve, those institutions may be able to incorporate specifically Namibian content into their programmes. Alternatively, we may need to develop courses specifically designed for teachers whose continuing education has primarily been in local and foreign private institutions.

### **SENIOR SECONDARY TEACHER EDUCATION**

The University of Namibia has primary responsibility for preparing our senior secondary teachers. That is a very important charge because our senior secondary students are the pool not only for important positions in our society but also for admission to institutions of higher education. Failure to provide high-quality education at this level, well tuned to the orientations of the education system as a whole, puts at risk our programmes of higher education.

Unfortunately, we are not yet able to meet the need for teachers at the level, with the consequence that we have come to rely heavily on teachers recruited in other countries, especially for science subjects. A recent study of the continuing shortage of teachers in Namibia concluded that conventional full-time training programmes will be unable to increase sufficiently the number of teachers in the schools over the next decade. That study

recommended adopting the teachers apprenticeship approach currently used in several countries, including Mozambique, Tanzania and Zimbabwe.

There are in fact three problems to be addressed here. The first has to do with ensuring that senior secondary education both reflects and supports the goals and objectives we have set for our education system. The second has to do with preparing sufficient teachers to permit an orderly and planned expansion of access to education in Namibia. The third has to do with ensuring that the quality of senior secondary instruction equips students well for their future jobs and for admission to higher education.

The University of Namibia seeks to address these problems and the critical shortage of qualified senior secondary school teachers prepared to teach International General Certificate of Secondary Education (IGCSE) and Higher International General Certificate of Secondary Education (HIGCSE) subjects through several related programmes described below.

### **COLLEGES OF EDUCATION**

Namibia currently has four colleges of education attached to the Ministry of Higher Education, Vocational Training, Science and Technology. Each college has its own establishment for academic, administrative and hostel personnel, with funding directly from the Ministry.

The colleges of education undertake to facilitate the development of teachers whose sense of responsibility, maturity, accountability, knowledge and skills will raise the quality of education in Namibia. They understand teacher education as a participatory process negotiated between students and teacher educators. They recognise that students have their own structures of knowledge formulated by their social, economic and political experience. They provide a course structure that allows all students to grow and to realise their own potential. In that way, they can draw on the individual and collective experience of students as well as teacher educators. They also undertake to encourage community involvement and to foster co-operation among themselves and with other institutions in order to develop an effective system of teacher education and research.

Education reform within the colleges of education rests on five pillars:

- Access
- Efficiency
- Quality of Provision
- Equity
- Democracy

For our teachers to be well educated, our teacher educators must themselves find ways to update and renew their own skills and recharge their motivation and enthusiasm. They, too, must be successful learners. They, too, must find learning intrinsically rewarding.

Unfortunately, for the present we are not where we need to be in that regard. Staff at our colleges of education have few or no opportunities to conduct research and to pursue further education. We must do better. For example, we need to revise staffing arrangements to enable a portion of our teacher educators to continue their education through short and long courses. At the same time, we need to be sure that our institutions of higher education provide the needed courses of study. Since systematic research is an essential component of effective teaching and teacher education, we need to make sure our teacher educators have time and support for research and to recognise their research initiatives and accomplishments.

Administratively, the colleges of education have many parents. Functioning under the authority of the ministry responsible for higher education, their principal focus - preparing teachers for primary school and secondary school through Grade 10 - links them organically to the ministry responsible for basic education. That ministry in turn relies on NIED to develop curriculum for basic education. By agreement between the two ministries, NIED, attached to MBEC, has primary responsibility for developing basic teacher education curriculum, with moderation by the University of Namibia. The colleges of education thus periodically find themselves puzzled about where they are expected to look for direction and support and about how their students can continue their education beyond the BETD. A consequence of the division of responsibility for education among two ministries, those ambiguities leave room for both creative initiatives and periodic frustration.

Governance and funding arrangements for our colleges of education are being reviewed. The colleges themselves seek greater autonomy to diversify their programmes and to manage their basic responsibilities and core budgets. Thus far, our emphasis has been on unifying the separate education systems we inherited at independence. At the same time, our expectation that schools, communities and especially teachers will play larger roles in the development of our education system may be strengthened by greater institutional autonomy. Accordingly, it may be desirable to encourage our principal teacher education institutions to assume greater responsibility for programme and curriculum development. Over time, it may also be desir-

able for our colleges of education to assume some responsibility for senior secondary teacher education.

As we work to find the appropriate balance between national direction and institutional autonomy, it is timely to develop a clearer specification of the relationships among the colleges, MHEVTST, NIED and UNAM, perhaps in the form of a framework directive or statute.

As we strengthen regional exchanges and cooperation in education generally, our colleges of education will develop and extend their links with their counterparts in neighbouring countries. We have much to learn from each other. Especially for the smaller countries, regional cooperation will make it possible for us to provide education opportunities, for example specialisation in areas where we have few teachers and fewer teacher educators, that would be far too costly for us to develop on our own. Since jobs, capital and people are likely to be increasingly mobile throughout the region, eventually we will need coordinated certification standards and accreditation procedures and credentials that are recognised in several countries. Both formally and informally this process of contact, communication and sharing has already begun.

## **UNIVERSITY OF NAMIBIA**

As noted above, the University of Namibia has primary responsibility for senior secondary teacher education, both pre-service and in-service. Currently, the Faculty of Education offers several teacher education programmes, which replace the former Education Diploma and Higher Education Diploma. Introduced in 1996, the four-year Bachelor of Education (B.Ed.) programme prepares teachers for senior secondary schools. Also introduced in 1996, the one-year Postgraduate Diploma in Education (PGDE) enables individuals who already have a first degree to become senior secondary school teachers. A third new programme, the Master of Education (M.Ed.) is designed to provide advanced training for senior posts in the Ministries of Education. For the present a general degree, this programme will develop disciplinary specialisations over the next several years. The specialised Diploma in Special Education is a two-year postgraduate programme designed for current teachers who wish to concentrate on teaching children with special learning, intellectual, emotional and sensory needs, including physical impairments, disabilities and handicaps. Eventually, similar programmes may be developed in guidance and counselling, early childhood education, primary education and adult and non-formal education.

Several major objectives frame the work of the Faculty of Education at the University of Namibia:

- Professional Education: to provide courses of study and practices designed for the initial training and professional development of secondary school teachers and other personnel in the Namibian education system; to provide in-service courses as needed and as possible.
- Advanced Study: to provide a centre for advanced study in education through which teachers, educators, administrators and researchers may attain academic excellence and be prepared for leadership roles in education through the acquisition of Master's degrees, doctoral degrees and other professional specialised qualifications.
- Affiliated Institutions: to assist institutions that may seek affiliation with the University through the Faculty of Education in the development of their programmes and staff and in the assessment and certification of their students.
- Research: to undertake and support basic and policy-oriented education research and to disseminate research findings through teaching, seminars and publications.
- Service: to promote innovation, expansion and improvement in education through the provision of advice, consultancies, public service and support to academic and professional partners, as well as to the community at large.

The University's teacher education programmes are designed to -

- extend the capacity for independent thinking, creativity and further study;
- strengthen the foundation in educational theory, practice, instructional strategies and assessment;
- develop the student teachers' mastery of school teaching subjects;
- provide opportunities for practical school based experiences;
- prepare student teachers for involvement and or development at school, community and national levels; and
- increase awareness of the need and opportunities for lifelong personal and professional growth.

In recent years the Faculty of Education has reviewed its curriculum and development to ensure that UNAM teacher preparation programmes are cost-effective, rationalised, consistent with national education policy and of appropriate standard. In designing new programmes, the Faculty of Education undertook extensive consultations with the education community in Namibia. A consensus emerged through this consultation that as a

tertiary institution, UNAM and its units are expected to concentrate on educating qualified teachers in all subjects, but with special emphasis on science-based subjects.

Teacher preparation and teacher education at the University of Namibia are based on an integrated, holistic approach which takes into account the need to prepare student teachers who are committed to participatory learner-centred and reflective teaching and learning.

Several other major philosophical and professional considerations orient teacher education at the University of Namibia:

- Teacher education should reflect national education goals and aspirations.
- Teachers must be able to assume a variety of responsibilities in a changing and developing society.
- Teacher education must provide not only an adequate preparation in the subject matter and pedagogy of each branch of study but must also develop the foundation for continued growth of knowledge.
- Teacher education must provide for both theoretical and practical professional development, which should not be limited to the students' acceptance of what is passed to them, but should include the notion that, given enquiring minds and basic research techniques, students themselves can contribute to our knowledge of teaching and learning.
- Teacher education should address the prospective teacher's personal and professional development after they have completed formal teacher education by nurturing a positive attitude toward lifelong education and a recognition of the importance for continuing professional updating while in service.

Attentive to the needs of graduates of the colleges of education to continue their professional preparation, the University of Namibia Faculty of Education proposes to develop a Bachelor of Education degree in Basic Education.

The University of Namibia is also considering developing certificate, diploma and degree programmes, with multiple entry and exit points, for adult and community educators and trainers in various fields, including early childhood development, parent education, youth work and literacy. In addition to their residential components, these programmes will rely on open learning, distance education and on-the-site training. Since several institutions offer courses and other education activities in these areas, University initiatives must be carefully coordinated with current and projected programmes.

The Namibia Mathematics and Science Education Programme (NAMSEP) has been identified as a priority area to provide specialised diploma and graduate mathematics and science teachers at both junior secondary and senior secondary levels, for which donor support is currently being sought.

The University of Namibia expects to launch a doctoral programme when there is a sufficient pool of Master's degree graduates.

The University is also involved in the continuing education of teachers. Three areas receive priority attention: further education for current teachers to enable them to reach the level of more recent BETD graduates; continuing education to expose experienced teachers to new thinking and new practices in their areas of specialisation and in education more generally; and the preparation of senior professionals to meet the needs of NIED, the inspectorate, education officers and the UNAM Faculty of Education. For the present, these needs are addressed largely through occasional workshops and colloquia. Over time, the Faculty of Education, in collaboration with other teacher education institutions, will need to develop a coherent and integrated approach to the continuing education of our teachers and teacher educators, including in-service seminars and short courses, longer courses and degree programmes. As appropriate, these activities should also address the continuing education needs of education planners and other education professionals in the education ministries and other government departments.

Evaluation of teacher education programmes has been a continuous process at the University of Namibia, relying primarily on *critical self-analysis*. The initial surge of critical self-analysis led to several reforms of teacher education at UNAM, including the reorganisation of the Faculty of Education into fewer, more cross-disciplinary departments and the beginning of a shift from indoctrinating curriculum and pedagogy toward a liberative and transforming approach. That critical self-analysis will now be supplemented by student evaluation of all UNAM courses. Also, a long-term study of school-based teacher education, in collaboration with the University of Oslo, will assist us in assessing our teacher education programmes and alternatives.

The University of Namibia is committed to maintaining effective collaboration with other teacher education institutions in the country. Since it shares with them responsibility for teacher education, the University seeks to establish a productive dialogue with the colleges of education. The po-

tential benefits of that collaboration are clear. Classroom practice, teacher education and research on education must always inform and reinforce each other. Insights at each level are valuable inputs and often critical feedback to the other levels. Common problems can fruitfully be addressed from several different perspectives and draw on different sorts of experience.

Notwithstanding its potential benefits, effective collaboration of that sort has not yet become a practical reality. Issues of appropriate domain, authority, responsibility and accountability remain contentious. The philosophy and practices of learner-centred education, articulated in *Toward Education for All* and elaborated through the development of the broad curriculum for basic education, seem to many to be little integrated into the curriculum and pedagogy of the Faculty of Education. New teachers express concern that continuing education paths between the colleges and the University have not yet been adequately defined and developed. Research cooperation remains a future prospect.

It is essential that the Faculty of Education at UNAM establish and maintain strong links with teacher education institutions within the SADC region and across Africa. Linkages could include exchanging expert staff, sharing problems and solutions and exchanging students in particular areas of study, a process that will foster cooperation and enhance mutual understanding. Indeed, this sort of interchange could enable our teachers and teacher educators to pursue specialised courses of study that we find impractical or uneconomical to develop within Namibia.

As a developing and young university, UNAM and the Faculty of Education in particular would benefit greatly from establishing and maintaining links with universities and other higher education institutions in other countries. Those links could result in staff development programmes for UNAM faculty, collaborative development of new joint programmes and shared research projects on dimensions of teacher education of mutual interest.

Generating up-to-date knowledge to improve Namibian education theory and practice requires investment in education research. Both basic and applied research are needed. We must find ways to explore systematically the large issues of education, for example language acquisition or cognitive development. At the same time, we must also address the sorts of issues that are critical to monitoring and improving our education system, for example, effective assessment, teaching strategies and uses of instructional materials. In addition to creating an enabling environment in which UNAM

staff can conduct basic and applied research, it is also essential to develop research skills among our students.

To enrich its programmes, the Faculty of Education has established an Advisory Board whose members include representatives from the two education ministries, NIED, teachers and headmasters. Periodic meetings should permit exchanges of ideas and experiences, evaluations of current programmes and proposals for new programmes. This effort will supplement, not replace, existing informal consultative, monitoring and evaluative mechanisms.

### **NATIONAL INSTITUTE FOR EDUCATIONAL DEVELOPMENT**

Created to stimulate and oversee the development and implementation of an innovative broad national curriculum, the National Institute for Educational Development has come to assume an expanded set of responsibilities and to occupy a complex institutional location. NIED's initial charge included reviewing and updating curriculum content, supervising curriculum development, especially the subject panels, overseeing textbook development, guiding the transition in the language of instruction and addressing the professional development of teachers. As the primary intellectual arm of our new education system, NIED's activities were intended to be responsive to the needs and requests of students and schools rather than directed solely or primarily by the decision of education managers and administrators. To play that role, NIED's organisation and decisions must be accessible and accountable to its clientele.

Finding the appropriate balance between research and development on the one hand and programme implementation and management on the other has proved to be a continuing challenge. In an effective education system theory and practice are necessarily linked. Indeed, applied theory and critical practice depend on each other. Still, conception and coordination are sometimes in tension with administration and assessment. The daily pressures of reforming the education system require a great deal of NIED's attention, time and energy, often at the cost of its other responsibilities, especially designing and studying a broad education reform process.

While NIED is formally a unit of the Ministry of Basic Education and Culture, its responsibilities have in practice required some autonomy of action. For example, NIED's major role in the development of basic education curriculum makes it essential that NIED work closely with the basic teacher education institutions, the colleges of education and their parent

ministry, MHEVTST. While the principle of that collaboration is clear, its leadership and forms continue to evolve. Especially since responsibility for education is shared across two ministries, we shall need to be imaginative, resourceful and collaborative in addressing NIED's autonomy and institutional location.

### **COMBINING AUTONOMY AND COORDINATION TO ACHIEVE COMMON GOALS**

As we have seen, responsibility for teacher education is shared among several institutions with overlapping roles and domains of activity. Currently, a joint agreement commits the institutions involved to cooperate in teacher education. That collaboration links the Ministry of Basic Education and Culture and the Ministry of Higher Education, Vocational Training, Science and Technology through the National Institute for Educational Development with the colleges of education and the University of Namibia. The agreement locates primary responsibility for basic teacher education in the colleges of education, establishes the University as a certifying co-authority for teacher education and assigns to NIED primary responsibility for evaluating and validating teacher education programmes. Certification is awarded jointly by the University of Namibia, the Ministries of Education through NIED and the relevant college of education.

Several different institutions are involved in preparing teachers for basic education, that is, the vast majority of our teachers. While the colleges of education are currently the site of nearly all the pre-service basic teacher education, the University is considering creating a Bachelor's degree in Basic Education. NIED, the colleges and the University offer in-service and continuing basic teacher education. Increasingly, private institutions, both within and outside Namibia, offer upgrading and other continuing education courses. Over time, we may find it desirable to involve other institutions as well in basic teacher education.

Where responsibility for teacher education is shared among several institutions, it is essential to find a creative combination of autonomy and coordination. Each institution needs to be able to develop its strengths and to make its unique contribution to the national education system. At the same time, effective coordination is required to maximise the impact of limited resources, avoid unnecessary duplication, develop a common curricular and pedagogical foundation for the basic education teaching corps and provide to teachers at all levels an attractive path for lifelong learning.

Currently, we are not achieving the coordination we need. Our legacy of multiple education authorities and segregated institutions and the ambiguities of authority and responsibility have led to persisting complaints that the courses of study in the colleges of education and at the Faculty of Education at the University of Namibia do not follow converging paths. There are two related concerns here. One is that the University's teacher education programmes have not yet sufficiently incorporated the principles, premises and content of basic education, which in turn may make it more difficult to establish our new education philosophy and pedagogy in our schools. The second is that college-educated teachers do not see a clear career path for their own continuing education, especially an opportunity to build on their BETD to complete a university degree without transferring from basic education to higher secondary or post-secondary education.

To address the first concern and our need for improved coordination more generally, it is timely to create a joint consultative teacher education body that includes the Ministries of Education, the colleges of education, the Faculty of Education, the National Institute for Educational Development, teachers and students. As appropriate, representatives of other ministries, departments and organisations can be included to address specific issues. To take effective decisions, participating organisations must be represented by senior officials able to commit needed financial, human and other resources. Where it is deemed useful, this consultative body should create technical task forces or working groups to focus concentrated and specialised attention on high priority programmes and problems. A committee or panel of the proposed national advisory council on higher education could play this role.

We are as well considering the constitution of a Standing Professional Advisory Committee on Teacher Education. Possibly to be chaired by NIED's Director, that Committee would include the Director of Higher Education, MHEVTST, the Rectors of the colleges of education, the Dean of the Faculty of Education and representatives of early childhood teacher educators, the Polytechnic, school principals and teachers. That advisory committee would advise the Minister of Basic Education and Culture and the Minister of Higher Education, Vocational Training, Science and Technology on all issues relating to teacher education; ensure coordination between stakeholders and institutions and programme articulation in teacher education in and for Namibia; ensure a close relationship between pre-school and school curricula and situations, and the curricula and delivery of

teacher education; approve curricula and syllabi for teacher education; recommend programmes for the professional development of teacher educators and for the organisational and institutional development of institutions providing teacher education; and initiate actions to improve teacher education in Namibia.

New institutional arrangements cannot in themselves remedy the lack of coordination. There must as well be the will to work together to set and implement a common agenda. That will must be strong enough to overcome each institution's tendency to favour its own perspective and particular interests. That will must also be sufficiently resilient to withstand the disagreements among the cooperating partners that are likely to occur periodically, that may be sharp and that will surely stress the consultative commitment.

As we address the issue of career path for our Basic Teacher Education Diplomates, we should be guided by two major objectives of education reform in our country. First, an effective education system has no dead ends. Every learner, young and old, novice and experienced, newly literate and extensively schooled, must have opportunities for continuing education. While the forms of that education will vary, it should enable learners to improve their skills and for those who wish to do so, to qualify for increased responsibilities and new positions.

Teachers are no exception. Indeed, teaching and learning are integrally connected. We are used to the idea that excellent teachers promote effective learning. We must also recognise that our most competent teachers are also energetic learners. Hence, whatever their level of education, teachers must have clear paths and continuing opportunities to improve their mastery and upgrade their qualifications.

Second, over time we must reinforce the professionalisation of our basic education teacher corps. Research has shown conclusively that the most important and most enduring education occurs at the youngest ages. Hence, we must entrust our youngest children to competent, sensitive and well-prepared teachers. Currently, we assign our university-educated teachers to senior secondary and post-secondary instruction. As we look toward the next century, we must find appropriate roles and rewards for university-educated teachers in our basic education programme and appropriate courses of study to prepare them for that.

## **Distance and Open Learning**

## **THE CONTEXT**

To explore the appropriate roles for distance and open learning, it is important to recall that Namibia is a large country with a very unevenly spread population. It is essential to note as well that our previous education history has led to an equally uneven distribution of tertiary qualifications among its different communities. Like education, poverty also varies considerably from one region to another. Both the World Bank and the United Nations Development Programme have highlighted the uneven distribution of wealth in our country, characterising Namibia as one of the most unequal countries in the world.

Poverty and the lack of education are linked. For example, Kunene is the region where illiteracy has the firmest grip on poverty. It is by far the most neglected region in terms of education. Investing in education in Okavango, Omaheke and Otjozondjupa will also contribute significantly to reducing poverty in those regions.

These two factors - size and unequal access to the education system - make it essential to use distance and open learning facilities to reach out to all corners of the country and to redress the inherited inequities.

Our investment in schools is already substantial. Developing our human resources and meeting the increasing demand for education through school-based education would require 80% of our national recurrent budget, which of course is not possible. As the 21st century approaches, lifelong learning must become a goal, a set of opportunities and eventually common practice for all Namibians. To achieve that, distance and open learning must play an increasingly important role in our education system.

Distance and open learning strategies become even more important in the context of Namibia's inability to afford, either financially or in terms of the consequences for daily activities, to release large numbers of its professional, managerial and paraprofessional staff for extended periods of in-service full-time training or upgrading. The institutional infrastructure at tertiary level that could permit a part-time alternative simply does not exist throughout the country, especially in the North, where the previously most disadvantaged majority live and work. As well, clear evidence from Pakistan and other countries shows that distance and open learning is one of the most effective ways of addressing gender imbalances in education.

Properly planned and provided, distance and open learning can in the very near future offer the majority of Namibian adults the most economic,

effective and available opportunities to seek tertiary-level qualifications. Limited financial resources, family and professional responsibilities and geography make other alternatives unaffordable or inaccessible. Indeed, for most Namibians with little or no higher education, this will be the only viable option. Distance and open learning offers the country as a whole the most cost-effective and rapid method of solving Namibia's critical human resource problem: a serious shortage of qualified professionals and managers. It is also the only economic way to address past inequalities among yesterday's school-goers, especially for a small population spread over a large area, much of it resident distant from the national capital.

## **THE CURRENT SITUATION**

The last decade has seen significant developments in tertiary distance and open learning. In the years immediately preceding independence two distance education programmes functioned within the country, one at the former Academy and the other in the Department of National Education. A third programme operated in exile, the Namibian Extension Unit.

Of these, the first became the Centre for External Studies (CES) at the new University of Namibia, managing and servicing distance education programmes of both the University and the Polytechnic through 1996, with about 2 000 external students annually. The Polytechnic has now delinked its distance education activities, accommodating more than one third of its total enrolment, from the CES and the University of Namibia and established its own Distance Education Centre.

The last two formed the basis for creating the Namibian College of Open Learning (NAMCOL), which has recently been established as a parastatal body responsible for pre-tertiary distance education. NAMCOL's initial priority has been programmes at Grade 10-12 level for those unable to begin or complete their schooling. To provide this second chance, especially in remote areas where there are no secondary schools, NAMCOL has developed a network of offices in all of Namibia's education regions. NAMCOL thus bridges the gap between courses offered by the National Literacy Programme of Namibia and education opportunities at tertiary level. In 1997 NAMCOL introduced a Certificate in Education for Development course intended to meet staff development needs of district literacy organisers, agricultural and health extension workers and community development workers, using materials from the University of South Africa. In 1997 NAMCOL enrolled 16 400 learners, of whom 65% were female.

The University's programmes to date have been primarily in teacher education, most for primary school teachers, with small community development and library science programmes. In 1997 two new degree programmes were launched, one for advanced nurse training and the other a B.Ed. degree for practising secondary school teachers.

The Polytechnic offers two external programmes, the National Diploma in Public Administration and the National Diploma in Police Science. As noted above, the Polytechnic now has its own Distance Education Centre.

The Basic Education Teachers Diploma, intended for serving basic education teachers, is a third Namibian tertiary-level distance education programme, managed by the National Institute for Educational Development. Currently, it enrolls about 1 000 teachers.

The Ministry of Fisheries operates a specialised, small-scale distance education programme, using course materials from the British Open University, to train fisheries research officers.

As well, several thousand Namibians, primarily teachers, are enrolled in South African tertiary distance education institutions, including UNISA, Vista University, the Technikon of South Africa and a College of Further Education.

## **POTENTIAL AND PRIORITIES FOR DEVELOPMENT**

The highest priority for Namibia today is in-service training for professional and paraprofessional staff. The biggest single demand and need is for teacher in-service education at all levels, including pre-graduate diplomas, bachelors degrees and post-graduate degrees. There is also a significant demand in the medical service, among nurses and other paramedical health workers. The third largest area, and over the longer term potentially the largest of all, is in the field of management training, in both the public sector (civil service, army, police, development management) and private sector (business and commercial management).

A second, smaller but in development terms equally important, potential for distance education and training is to meet selected high-level and specific training needs in both the public and the private sectors. Those needs might include advanced management training, post-graduate scientific and technological training and advanced industrial and commercial training. Two current programmes provide models for how we might address these needs by purchasing and adapting courses developed elsewhere. In addition to the Ministry of Fisheries programme noted above, the University of Na-

mibia Faculty of Economics and Management offers an M.Sc. programme acquired from the School of Oriental and African Studies in London. Managed by a Namibian tertiary institution, similar approaches could be used to meet other high-level government and industry training needs.

A third focus for distance and open learning is our capable students whose location, family circumstances and work and other obligations make it impossible for them to begin or to continue residential higher education courses.

A fourth priority for distance and open learning, at least in the short term, is for bridging courses to upgrade the English, mathematics and science knowledge and skills of potential higher education students.

To date, distance education in Namibia has followed essentially an individualised, home study correspondence model. Very little organised student support has been provided, and little or no use made of media other than print. One result has been high attrition and failure rates. There is now the need and the potential to develop more supportive and less wasteful systems, utilising more localised face-to-face tutorial networks as well as additional media, including telephone and computer-based reference, information and tutorial networks. As our approach to distance education evolves, it is imperative that we explore seriously the possibilities of sharing and purchasing high-quality distance learning materials produced elsewhere in order to maximise subject coverage while minimising development costs.

Initiatives in several neighbouring countries, for example Botswana, South Africa, Zambia and Zimbabwe, envision developing tertiary distance education programmes leading to Bachelors degrees in Education, Business Administration and related disciplines. It makes strong economic sense to explore sharing in the development of such programmes. Regional cooperation would likely allow increased investment in the development of high-quality materials and services. Proceeding in that way would be consistent with the 1994 Human Resources Development Report of the Southern African Development Community (SADC) on access to higher education in the SADC Region and its recommendations for increased shared access to national higher education programmes and shared specialist course development. That cooperation would implement the intention of regional distance education institutions to find practical ways of collaborating on and sharing course development for distance education.

## **CONSTRAINTS AND RISKS**

While they may sound straightforward, these improvements in distance and open learning may in practice be difficult to achieve. Consider, for example, the number of learners who must be served and their locations. In many countries, distance learning is an especially cost-effective strategy for providing education opportunities to large numbers of adults. In those settings, the development costs per learner may be quite low. In Namibia, however, for the foreseeable future most tertiary education courses will serve small numbers of learners - tens or hundreds, not thousands - each year. With the possible exception of teachers, that will also be the case for most in-service programmes. Since high-quality distance education courses are expensive to produce initially, the cost per learner in Namibia may be quite high. Or, to put that somewhat differently, it may not be feasible financially to develop a large number and variety of courses, each for a very small pool of learners. It would be very short-sighted to ignore this problem and compromise quality to reduce costs, producing ineffective courses that have very low success rates or failing to complete course development projects.

This problem of developing materials for small groups of learners is compounded in Namibia by the tendency toward institutional fragmentation of design, production and student support services. Where each institution develops its own programmes, all for small groups of learners, there is little possibility for economies of scale. As well, those institutions compete for a small number of qualified and experienced part-time materials writers and tutors, with the result that fee levels and individual availability, rather than a coherent set of national, or even institutional, priorities will determine which courses and services are offered.

Acquiring and adapting courses developed by others has the potential to reduce the per-learner development costs for distance and open learning. To date, with some exceptions our institutions have seemed reluctant to pursue this strategy, perhaps concerned about the potential loss of control over curriculum, pedagogy and education priorities more generally. The alternative, however, may be equally unattractive: very high local production costs make it impossible to develop many courses, or to do so quickly, or to develop courses in response to changing needs, or to modify existing courses.

Where Namibian institutions have not been able to meet the demand for distance and open learning, external institutions have rapidly filled the vacuum. While that approach may address the immediate needs of particular groups of learners, and indeed may do so in a cost-effective manner, those institutions are little subject to Namibian curriculum, assessment, or quality control, potentially putting at risk both the quality of instruction and its contribution to achieving national education goals.

## **INSTITUTIONAL OPTIONS**

For the foreseeable future, the biggest demand for distance and open learning in Namibia will be at pre-tertiary level, addressed primarily by the Namibian College of Open Learning. Both NAMCOL and the tertiary distance education units could benefit from collaborative use of materials production and development skills and facilities and shared regional and local provision of student support facilities and services. Collaboration across the boundaries of basic and higher education, though institutionally difficult to achieve, could make significant contributions to the quality of distance and open learning services to our students at all levels. As we consider how best to proceed, we should work toward collaboration of this sort.

How, then, can we make effective use of distance and open learning for higher education in the context of a large country with small groups of learners and thus relatively high per-learner development costs? We might organise our efforts in several different ways, each with advantages and disadvantages.

- (1) ***Continued separate institutional development*** in which all tertiary institutions establish their own distance and open learning units and manage their own programmes. This approach has the advantage of enabling each institution to define its programmes according to its own priorities and to tailor its activities to the particular set of learners it seeks to serve. At the same time, since this approach is very likely to produce overlapping and duplication of courses and facilities, it is also likely to have high development costs in both absolute and per-learner terms and therefore probably lower quality and perhaps fewer offerings.
- (2) ***Separate but coordinated and shared development*** in which all tertiary institutions retain responsibility for managing their own programmes but cooperate to share development costs and to coordinate outreach

resources. This approach will likely require a national council for distance and open learning to oversee the allocation and shared use of resources. That, however, may be perceived as a national regulatory body resisted by the tertiary institutions as intrusive and unproductive. This approach might reduce but would not eliminate overlapping and duplicate facilities, courses and management activities.

- (3) *A self-standing open university* in which a separate and autonomous tertiary institution is created with exclusive responsibility for tertiary open and distance learning programmes. In theory, a national open university might, as in other countries, be able to produce very high quality professional programmes. This approach could thus address the disabilities of the two previous approaches, especially their potential for maintaining costly overlapping and duplicated services. A national open university would, however, inevitably compete with existing institutions and organisations for trained staff, resources and finance and would not necessarily satisfy each tertiary institution's sense of high-priority distance education needs. Substantial start-up costs and the very small number of potential students at this level in Namibia combine to make this an expensive approach, in terms of both absolute and per-learner expenditures.
- (4) *A single distance and open learning unit, attached to an existing tertiary institution* that caters for the distance and open learning needs and ambitions of all tertiary institutions. While a unit of this sort would be attached and administratively responsible to a single institution, it would address the goals and priorities of all tertiary institutions and be accountable to them. Higher education institutions' tradition of autonomy makes them reluctant to assign even a limited part of their overall academic programme to another institution. The challenge of this approach, therefore, would be to devise a policy-making, budgeting and managerial strategy that involves all tertiary institutions sufficiently to reduce their inclination to develop their own programmes.
- (5) *A single, independent distance and open learning unit managed as a consortium by and for all tertiary level institutions.* This approach seeks to develop a manageable compromise between the cost-effectiveness of a single unit and the responsiveness and specialisation of the separate tertiary institutions. Such a body, while self-managing on a day-to-day basis, would need to be, and to be seen to be, jointly owned by all tertiary institutions, which would have joint overall policy-

making control. It would require its own management and administrative structures and budget. It would need to have, by the agreement of the tertiary institutions, access to their expertise and inputs in order to minimise the need for its own academic staff.

## **Other Programmes and Activities**

## **NATIONAL QUALIFICATIONS FRAMEWORK**

One of the major developmental objectives of reforming our education system is to make it possible for people to begin or resume their education at different points in their lives. For that, it will be helpful to have many different sorts of education programmes, with diverse sponsorship and management. While that diversity will assist in expanding access to education, it also makes it more difficult to be sure that different education experiences with the same name or at the same level are in fact functionally equivalent. Adopted by the Namibian Parliament in 1997, the National Qualifications Framework seeks to address that question and to do so in a manner that will be credible both locally and internationally.

The core concept of this approach is that expert boards or committees, well rooted in their particular area of the economy, will define qualifications in that area and relate them to specific levels of education achievement and/or work experience. The implementing agency for this approach is the Namibia Qualifications Authority (NQA), which will function as the overall coordinator of those committees, ensuring that they operate within agreed principles and procedures and maintaining openness and accountability.

### **NAMIBIA QUALIFICATIONS AUTHORITY**

The National Qualifications Framework aims at establishing the evaluation and accreditation of national qualifications in all sectors where education and training take place. The Namibia Qualifications Authority will also establish policies and procedures for setting and disseminating knowledge about national standards in education and training and for promoting the recognition of national and international qualifications. To carry out these functions, the Namibia Qualifications Authority has been established as a statutory body with four main functions: evaluation of qualifications; accreditation; recognition of prior learning; and standard setting.

Specifically, the Namibia Qualifications Authority will -

- set up and administer a national qualifications framework within which qualifications conferred by higher institutions of learning will be registered and the level on which job titles connected to a qualification classified;
- function as a forum for matters pertaining to qualifications;
- set the occupational standards and curriculum standards required for achieving the occupational standards for any occupation, job, post or position in any career structure; and

- confirm that particular institutions meet formal requirements and then accredit their education programme and courses of instruction.  
The policy role of the NQA will include -
- providing guidelines along which national standards can be set by established standards-setting committees consisting of all the stakeholders, who will agree on the content and application of national competence standards. In this process, higher education must play an important role. In the course of defining the key responsibilities of standards-setting committees, the NQA may confirm the classification of knowledge in the field of learning for which a particular national standards-setting committee is responsible;
- recognising qualifications that satisfy national competence standards that have been accepted by standards-setting committees;
- fostering the democratisation of the policy for accrediting institutions and courses through accrediting committees (higher education should develop the manual on how the accreditation process should function);
- developing a system that recognises prior learning according to agreed national standards; and
- disseminating information to interested parties through the establishment of a national registry of accredited courses, training programmes and providers.

As we proceed to implement this system, we shall need to be very creative and very resourceful in addressing the tensions between this focus on outputs of education and training and the other elements of our national education philosophy that emphasise education as process. The issues here are both theoretical and practical and both substantive and procedural.

The value of objectives-based learning and certification is clear. Directing primary attention to outputs (general or specific competencies developed) rather than inputs (instructions to teachers and schools about what they are to do) will assist us in developing an education system that has multiple entry points, that enables people to resume or continue their studies after interruptions and that offers widely recognised and therefore portable credentials. Beyond its general advantages, an education system of that sort seems especially promising for our country, since our formal school system cannot readily accommodate the many Namibians with little, disrupted or no education.

Yet, as we focus on outcomes, we must not lose sight of the importance and consequences of understanding learning as process. Often, the process of learning is far more important than its outcomes, or perhaps more accurately, the process is itself the most significant outcome. Our commitment to holistic, learner-centred education, for example, recognises the importance of the active role of each learner. We work to structure the learning environment to enable learners to assume increasing responsibility for the learning process, both while they are in school and, equally important, after they have completed their formal schooling. We emphasise problem solving and cooperation. We seek to enable our students not only to provide correct answers to standard questions but also to develop new questions and new approaches to old issues. As we revise our education practices to assign high priority to these concerns, we continue to rely on examinations and other assessment measures that are generally inattentive to these core components of learner-centred education. Hence, we must be very careful to ensure that a qualifications and credentialing system that focuses on outputs does not function in practice to undermine major elements of our national education philosophy.

Similarly, understanding learning as process highlights the value of unanticipated outcomes and truly innovative outcomes that enter domains that are not yet charted or even named and that therefore, though potentially very valuable, cannot be certified on the basis of existing criteria. Competent teachers know that their most imaginative and creative students often surprise them. A brilliant author may dramatise part of the human experience by ignoring the usual rules of composition or by asserting broad poetic license with grammar and punctuation. A promising mathematician may offer an innovative solution to a geometry problem rather than completing the standard proof. Another student may explore problems of environmental degradation by combining lessons of history and an understanding of photosynthesis, that is by developing scientific insights that the teacher who planned the lesson had not foreseen. While skilled teachers of course recognise and reward these ideas and insights, a focus on standard measures and heavy reliance on standardised examinations risks devaluing them.

In sum, to support our national education philosophy, our qualifications system must address creatively and systematically several related challenges. It must develop strategies for dealing with outcomes that do not yet feature prominently in our examinations and with outcomes that are desirable and specifiable but that may not be readily measured. It must resolve

disputes among contending certification standards and bodies. It must ensure that common standards do not ignore what we value about difference, especially the culture and norms of our diverse communities. It must also find ways to incorporate the goals and values of learning-as-process.

### **ACCREDITING TEACHER EDUCATION**

Based on the establishment and recognition of common standards, this approach to education and training in Namibia requires that instructional design be separated from the standards-setting process. In that way, proposed curricula can be assessed against the national standards and accredited if they meet those standards.

The accreditation process, like the standards-setting process, must provide for democratic participation to enable those most involved in a particular domain to voice their concerns and share in the responsibility for the decisions made. Accreditation of education and training programmes should thus be done by panels or other bodies consisting of the industry or occupational training advisory committee and others deemed appropriate by the Namibia Qualifications Authority.

Within this framework, we have established an accreditation council for teacher education: the National Accreditation Council for Teacher Education in Namibia (NACTEN). Formally, NACTEN is an advisory council under the NQA. NACTEN is the body in the Republic of Namibia authorised to recommend accreditation of qualifications for the teaching profession in accordance with NQA policy on accreditation.

NACTEN's aims are to -

- oversee the development, maintenance and promotion of national standards in teacher education;
- ensure that teacher education achieves a professional national and international standard;
- promote the status of the teaching profession in society at large through the guarantee of standards; and
- ensure that providers of teacher education have the capacity to offer courses that meet national standards.

To achieve those aims, NACTEN will -

- oversee the development of national standards-based qualifications for teacher education in terms of knowledge, skills, attitudes and personal attributes required to attain a specified level of qualification;
- accredit or re-accredit and register those national standards;

- accredit or re-accredit and register courses designed to meet the national standards for teacher education and training;
- provide quality assurance in teacher education by encouraging self-evaluation by providers of teacher education and training;
- have access to all providers of teacher education and training for the purpose of accreditation and re-accreditation;
- issue guidelines regarding criteria, methods and procedures for accreditation; and
- issue policy and guidelines for credit transfer and recognition of prior learning in teacher education.

### **EVALUATION OF INDIVIDUAL QUALIFICATIONS**

Having previously depended on South African standards for evaluating individual education qualifications, at independence we found ourselves with a pressing problem: how to assess - systematically, fairly and promptly - the degrees and certificates of those educated in other countries. Of approximately 88 000 Namibians outside the country during the liberation struggle, some 54 000 have returned, with education qualifications from many different countries, with widely varying expectations, standards and procedures for assessment and reporting results.

As is common practice in many countries, returnees' qualifications were reviewed according to a standard set of criteria: minimum qualifications required for admission to a course of study; status and accreditation of the institution awarding a particular certificate (for example, university, technician, college of education); duration of a course; contents of a course, including structure, depth and duration of subsections, language requirements and practice teaching where appropriate; requirements for a pass, including research and dissertation; and proof, usually a certificate or diploma, of successful completion of a course and the recognition granted to that qualification in its own country.

Applying these criteria, however, highlighted several problems. They emphasised entry requirements rather than the skills or knowledge or competencies achieved. They had no provision for evaluating occupational competencies or for recognising skills developed in settings other than the formal education system. Nor did they include mechanisms for transferring credit between the formal and non-formal education systems. Ultimately, those criteria were dependent on assessments by providers of their own

courses and programmes, with neither public guidelines nor accountability to government, employers and other users of education qualifications.

Grappling with the details of these individual cases reinforced the conviction that they could best be handled in the context of a national standards-based qualification system. Accordingly, the responsibilities of the Namibia Qualifications Authority, discussed above, were expanded to include the review of individual qualifications.

In reviewing individual qualifications, the Namibia Qualifications Authority will work closely with other institutions and organisations with legal responsibilities for certification. The NQA's major function will be to ensure a nationally consistent approach to standards based qualifications, accreditation and competency recognition in the public interest.

Pending completion of the establishment of the Namibia Qualifications Authority and the inception of its activities, the Ministry of Higher Education, Vocational Training, Science and Technology will be responsible for evaluating individual education qualifications, including those of Namibians educated overseas and Namibians enrolled in private and other non-governmental institutions. Currently, MHEVTST evaluates some 2 000 qualifications annually.

### **STUDENT FINANCIAL SUPPORT**

Earlier, nearly all of the small number of Namibians who entered higher education did so with extensive government support, generally in the form of bursaries that covered both direct education fees and related expenditures for accommodation and travel. That approach to funding higher education students is no longer viable in contemporary Namibia.

The major problem with the old approach is that it served very few people. As we succeed in expanding access to higher education our resources do not permit us to maintain support at that level for a much larger number of learners.

As well, the old system was heavily oriented toward assisting students who entered public service. It made no provision for addressing other national needs. A third problem with the previous system is that it did not distinguish between genuinely needy students and those whose access to financial resources would have enabled them to proceed with their studies without government assistance.

Overall, the old bursary system proved to be inequitable, inflexible and wasteful. Its administrative apparatus was cumbersome, complicated and

uncoordinated. The fact that it was neither transparent nor accountable to the broad education community left it vulnerable to various forms of abuse.

In the light of these problems, and especially to accommodate a steadily expanding pool of higher education students, we have adopted a new Government Student Financial Assistance Scheme. Its major objectives are to serve more students by offering loans as well as grants and by expecting students and their families to pay a larger portion of the costs of their education, to encourage students to pursue high-priority courses of study, and to provide incentives for academic excellence and government service.

Informed by national development goals and priorities, the new Government Student Financial Assistance Scheme has several guiding principles:

- Grants and loans should be awarded for the sole purpose of assisting needy and deserving students in matters directly related to their education and training.
- The Scheme should be legally established as a Fund overseen by a Board of Directors that includes Government, students, unions, higher education institutions, private sector employers and other stakeholders.
- The Fund will make available two forms of financial assistance: grants and loans. One aim of the Fund will be to replenish its resources through repayments by loan recipients, thereby enabling more students to benefit from its support.
- Assistance should be renewable annually, dependent on satisfactory academic progress.
- Criteria for awarding grants and loans should include: (a) relationship between a student's course of study and the objectives of the National Development Plan 1, especially the priority assigned to education, health and agriculture; (b) applicants' social situation and special circumstances (for example, poverty, gender, marginalised status, disability); (c) merit, measured by academic performance; (d) regional balance; and (e) priority points assigned to particular fields of study, with highest priority for teaching, medicine, health, agriculture, natural science, computing and engineering.
- The Scheme should be flexible to cater for special circumstances.

In practice, grants will be awarded to students who study high-priority subjects. For most students, grants will cover tuition but not meals, accommodation and transport, and will generally require government service for a period equivalent to the length of the studies that were supported. Grant

recipients who choose not to work for government will have their grants converted to loans to be repaid at market interest rates. Where a convincing case can be made, grants may be made for fields of study not deemed national priorities. Loans may also be provided to pay costs related to education, for example accommodation.

Loans will be available to students in other areas and will be repayable at a discounted interest rate once the former student's salary reaches a specified threshold. Loan recipients with outstanding academic records or who are subsequently employed by government may apply to convert part of the loan into a grant.

## **HIV/AIDS AND HIGHER EDUCATION**

Like other countries in southern Africa, indeed throughout the world, Namibia has increasingly confronted the Human Immunodeficiency Virus (HIV) and Acquired Immune Deficiency Syndrome (AIDS). These two cumbersome terms refer to an infectious virus that eventually weakens the immune system that usually protects us from illnesses and infections. When the immune system can no longer do its job effectively, health can deteriorate rapidly. It is important that we recognise the spread of HIV/AIDS and that we deal with it imaginatively and systematically, without, of course, diminishing our attention to other public health problems like malaria and tuberculosis. A particular challenge in that regard is that HIV/AIDS is often spread through sexual contact. Hence, many people find it more difficult to discuss HIV/AIDS frankly and openly, which in turn impedes our efforts to encourage those most at risk to learn more about HIV/AIDS and to modify their behaviour to reduce its spread.

Higher education has two special responsibilities in this regard. The first is to be sure that we do not discriminate within higher education institutions against those who suffer from HIV/AIDS and that we support their efforts to complete their studies or continue their work. Second, we must play a leadership role in educating both the higher education community and the general public about HIV/AIDS and about how we can deal with it.

The Constitution of the Republic of Namibia recognises the inherent dignity and the equal and inalienable rights of all members of the human family. These rights, which include the right of individuals to life, liberty and the pursuit of happiness regardless of race, colour, ethnic origin, sex, religion, creed or social or economic status, are pillars necessary to support

our efforts to develop a society characterised by freedom, justice and peace. In a similar way, our Constitution provides special protection for fundamental human rights and freedoms, including the protection of liberty, respect of human dignity, equality and freedom from discrimination, privacy and the right to education.

All Namibians enjoy these rights and protections, including those infected by HIV/AIDS. We must, therefore, work hard to eliminate formal and informal discrimination against those who have become infected or who are believed to be infected.

The tendency to discriminate against those who suffer from HIV/AIDS usually stems from ignorance about HIV/AIDS. The World Health Organisation Global Programme on AIDS reported that infected persons can often live and work normally for ten years or more from the time of their infection. With appropriate counselling, infected people do not pose a threat to anyone in the work or classroom environment.

Employees in the higher education sector who have tested positive for HIV/AIDS must be encouraged and enabled to continue working for as long as they are able to fulfill their job requirements. Similarly, students who have tested positive should be encouraged to complete their studies, if possible, and given the option to reconsider continuing their studies if that is medically advisable. Clear and documented medical opinion is required to justify discontinuance of studies. We must be imaginative and caring in providing appropriate assistance to HIV/AIDS-positive higher education staff and students designed to enable them to maintain productive and fulfilling lives.

Within higher education we must develop an HIV/AIDS charter that provides guidelines for the prevention of HIV/AIDS transmission and for the needs and care of persons who have tested positive. That charter should reflect a collaborative effort of all involved in higher education.

As we work to develop a supportive environment within higher education, we must also play a prominent education role. In conjunction with public health initiatives, we must conceive and implement information and education campaigns, augmented by appropriate counselling, seminars and workshops. Information and education on HIV/AIDS must be integral parts of the curriculum in all higher education institutions, and especially in the colleges of education and other settings where we prepare our educators. The University of Namibia and the Polytechnic of Namibia have designed comprehensive guidelines on HIV/AIDS.

We must also draw on the guidance and efforts of our colleagues in the health sector. The Ministry of Health and Social Services has designed information, training and counselling modules for national use. That Ministry has also launched a National Action Plan for HIV/AIDS.

As we educate ourselves about HIV/AIDS, we must also assume our responsibility for educating Namibia's educators and through them, all of Namibia.

## **NAMIBIA NATIONAL COMMISSION FOR UNESCO**

The Namibia National Commission for UNESCO (NATCOM) provides liaison and coordination between the Government of Namibia and the United Nations Educational, Scientific and Cultural Organisation (UNESCO). Located within the Ministry of Higher Education, Vocational Training, Science and Technology, NATCOM fulfils that function for all government ministries and departments and provides services to the entire country in UNESCO's four fields of focus: education, science, culture and communication. NATCOM's activities include coordinating and supervising UNESCO-funded projects, facilitating visits to Namibia and Namibians' participation in international conferences, training seminars and workshops, disseminating UNESCO publications and other information, facilitating UNESCO-related workshops in Namibia, and supporting UNESCO-initiated pilot projects. Currently, three UNESCO pilot projects are active in Namibia: Street Children Project, Education for Human Rights and Democracy, and Culture in the Neighbourhood.

A network of UNESCO university chairs is being developed that links the University of Namibia to the University of Dakar in West Africa and Makerere University in East Africa. This cooperative effort is intended to explore the types of technologies used in various parts of Africa and to make them accessible to local communities to improve local products and production methods.

## **OTHER ACTIVITIES OF THE MINISTRY OF HIGHER EDUCATION, VOCATIONAL TRAINING, SCIENCE AND TECHNOLOGY**

Providing education in our society involves a large number of people and many different institutions. While each organisation has its own objectives and responsibilities, our goal should be to improve coordination and complementarity across our education system. With that goal in mind, it is use-

ful to note here other MHEVTST activities related to the development of higher education. As policies and programmes are developed and clarified, objectives, priorities and activities of the other major domains that fall within the responsibility of the Ministry of Higher Education, Vocational Training, Science and Technology - particularly vocational skills development, technical education and training and technological education and research, science and technology - will be elaborated in separate White Papers.

### **VOCATIONAL SKILLS DEVELOPMENT, TECHNICAL EDUCATION AND TRAINING AND TECHNOLOGICAL EDUCATION**

Among the goals of the Ministry of Higher Education, Vocational Training, Science and Technology is the development of a comprehensive and integrated system of mass vocational skills development, technical education and training and technological education. The programme of mass skills development and education with production will be based on the developmental needs of communities, the rural areas and small enterprises and micro-industries. The training programmes will be based on the concept of needs assessment, technology, training and development. The approach is to organise small business development or cooperative enterprises. This means that developmental needs which are of economic value will be identified, that technologies to address those needs will be developed and that trainees will become skilled in those appropriate technologies as they apply them for development needs. The needs, technology, training and development programme (NTTD) will be implemented in *schools without walls*. NTTD will promote youth empowerment. Vocational education and training will be developed into a comprehensive system of artisan training in a variety of vocational and commercial skills areas. This will involve the design and development of curricula, training modules and testing systems. It will also require the physical improvement of training centres and developing their capacities. Technological education will be provided at the Polytechnic of Namibia and other institutions associated with it; coordination will be necessary to avoid fragmentation and undesirable duplication.

### **RESEARCH, SCIENCE AND TECHNOLOGY**

Another goal of the Ministry of Higher Education, Vocational Training, Science and Technology is to harness science and technology, research and development for the benefit of the community and for rural develop-

ment, improvement of the quality of life, job creation and the development of small-scale enterprises and micro-industries. That goal will be addressed through several coordinated activities. The Ministry will establish and coordinate a National Council for Science and Technology, Research and Development (NCSTRD), which will advise on policy, priorities and resources for research and development, science and technology. The Ministry will develop and maintain a National Documentation Centre for Science and Technological Research to serve as a clearing house and documentation centre. The Ministry will as well establish Regional Centres for Appropriate Technology to facilitate the dissemination of information on appropriate technology for community and rural development and cottage and small-scale production processes. As it develops these institutions, the Ministry will review the state of science and technology, research and development in the country in order to define an appropriate research agenda and enhance links among researchers and users of research results within and outside Namibia.

### **HUMAN RESOURCES DEVELOPMENT**

Any nation's primary resource is its people: their creativity, ingenuity, capabilities, competencies, knowledge, skills and will power. Thus, our developmental goals can be achieved if, and only if, the creative and intellectual potentialities of all our people are developed to their full capacity. Accordingly, the Ministry emphasises *human resources development*. To enable youth to acquire productive skills through vocational education and training and to complete higher education, the Ministry is strengthening and restructuring the national system of Students Financial Aid to make it more responsive to the needs of the learning community. Its core operating principle will be study loans, partial loans and grants determined by the circumstances of the individual applicant or field of study. As noted above, we have established a Namibia Qualifications Authority to define Namibia's national standards in all sectors where education and training take place. For that purpose, it will establish policy and procedures for the evaluation and accreditation of qualifications in education and training and national standards for accrediting providers of courses. The Ministry will liaise with other government agencies, offices and ministries to establish priorities for human resource development, for the allocation of study fellowships and bursaries and for the development of higher education and vocational and technical education more generally.

## **NATIONAL RESEARCH COUNCIL**

Research has a crucial role to play in addressing Namibia's development problems. Unfortunately, the research tradition in our country is underdeveloped and research output is meagre. In the past, a good deal of the research in our country has been undertaken by non-resident scientists employed by transnational corporations and by visiting students, scholars and consultants. Government departments and parastatals have generally concentrated their limited research activities on their own specific areas of interest, with few links to other research efforts. Still growing, the research capacity of the University of Namibia has had its major impact in the humanities. Currently, there is significant demand for research concerned with agriculture and natural resources, food security and nutrition, health and environmental issues related to Namibia's fragile ecosystem. Overall, national development requires increasing the number of skilled, experienced and practising Namibian researchers in all fields.

To address those needs, Namibia must develop a national research policy, priorities for action and allocation of resources, and the organisational structure for conceiving, refining and implementing that policy. To facilitate and coordinate that process, a Namibia National Research Council will be established, composed of research administrators, professional researchers, policy makers, managers and practitioners. The membership should reach across academic disciplines and represent the range of research institutions in Namibia. Membership should reflect regional and local as well as national perspectives. The Namibia National Research Council's working procedures should encourage broad participation in discussions of policies, priorities and resources and must embody the principles of transparency and accountability. In collaboration with the national research community and others concerned with the process and products of research, the Ministry of Higher Education, Vocational Training, Science and Technology will develop a comprehensive programme of action for the development and operation of the Namibia National Research Council.

## **REGIONAL COOPERATION**

In many important respects, our education policies and programmes have for many years had a regional character. For example, our schools used South African course materials and examinations, while many of our students studied in South Africa. Now that the apartheid era history is behind

us, we can proceed to develop new relationships with our regional neighbours. Throughout in this White Paper we have noted several initiatives for regional cooperation in higher education.

In 1997 the Heads of State of the Southern African Development Community (SADC) signed a Protocol on Education and Training, which Namibia ratified in 1998. That protocol has great promise for facilitating cooperation and coordination across the region and for enabling our students to pursue courses of study that might prove prohibitively expensive for each country to develop for its own students.

To facilitate student and staff mobility and access to tertiary institutions throughout the region, that Protocol calls on us to reserve 5% of our admissions to higher education institutions for students from other SADC states. The Protocol also obliges each country to apply uniform fees and accommodation charges to students from all SADC members. When it comes into effect, that provision should substantially reduce the fees and charges we are currently paying for Namibian students who study in South Africa and other SADC countries.

In addition to calling for the elimination of visa, residency and other formal and informal barriers to student and staff mobility, the Protocol envisions an ultimate harmonisation, equivalence and eventual standardisation of entrance requirements, qualifications and credit for academic work completed.

Recognising the importance of sharing development and operating costs and avoiding unproductive duplication, the Protocol envisions the establishment of centres of specialisation, primarily at the post-graduate level but in critical disciplines, for example medicine and engineering, also at the undergraduate level. Higher education institutions are to bid to be selected to develop centres of specialisation, to which all SADC countries will send their students. Hence, we shall need to explore carefully those areas in which we will seek to develop one or more Centres of Specialisation within Namibia.

The Protocol also envisions the creation of centres of excellence in critical areas of research to maximise the use of scarce resources and expensive research facilities. Those centres of excellence are to be distributed fairly throughout the region. Here, too, we shall need to explore carefully those areas in which we will seek regional recognition of one or more of our research centres and institutions as centres of excellence.

## **Future Directions**

## **EDUCATION FOR DEVELOPMENT REQUIRES DEVELOPING EDUCATION**

Higher education is a vibrant part of our society. Nearly everyone has an opinion about what it should do and how it should be organised. Specialists and non-specialists alike regularly suggest reforms of existing institutions and practices and new departures. As those suggestions are considered and debated, some find broad support while others are viewed as undesirable, impractical, or both. That is as it should be. We must continue to shape higher education to our needs and do so in ways that facilitate broad participation and public accountability.

For them to be useful, we must organise these deliberations as we do our education system more generally. We should encourage innovation and experimentation. We must be willing to consider new ideas, even when at the outset they may seem not well grounded or impractical. For higher education to serve its developmental role, periodically we will need to take risks on initiatives that hold great promise but whose success is not assured and to make investments whose payoffs will be far in the future. At the same time, we must subject all suggestions to systematic and rigorous review and evaluation. We must ask hard questions about costs, benefits and feasibility. We need to be sure that we consolidate what we have accomplished, even as we explore how we might expand.

Accordingly, it is useful here to note several proposed initiatives that seem especially promising. For the present, we can outline these future directions. Their full content remains to be elaborated and refined, which in turn will inform their implementation. As we proceed, it will be essential to coordinate efforts to be sure that each activity complements rather than unnecessarily duplicates the others. For that, we shall need to assume that the principal mode of interaction among our higher education institutions will be cooperation and at the same time to agree that healthy competition in some domains should be encouraged.

### **UNIVERSITY OF NAMIBIA: NORTHERN CAMPUS**

One consequence of Namibia's geography and history is that the majority of our population live far from the centre of the country. To better serve the large population of northern Namibia, the University of Namibia anticipates extending its activities in the North, with the eventual development of a satellite northern campus. Drawing initially on distance education activi-

ties, over time the northern campus will offer residential courses comparable to those available on the Windhoek campus.

### **POLYTECHNIC OF NAMIBIA: BACHELOR OF TECHNOLOGY DEGREE**

The Polytechnic of Namibia will play an increasingly important role in technical and technological education in our country. Linking understanding to practice, its emphasis will be on application of knowledge to the problems our society faces. As it strengthens its schools and facilities, the Polytechnic should progress toward the development of programmes leading to a Bachelor of Technology degree, drawing on the experiences and standards of those at comparable institutions in southern Africa.

### **NATIONAL UNIVERSITY OF TECHNOLOGY OF NAMIBIA THE APARTHEID SHADOW**

The legacies of colonial and apartheid policies of exploitation and discrimination continue to haunt our society. Seventy-five percent of our population eke out their livelihood from small-scale agriculture in communal areas, while some 4 000 commercial farmers occupy 44% of our total agricultural land area. Ninety percent of our population share among themselves only 35% of the national income, whereas the richest 10% of our society receive 65% of our national income. Large transnational firms exploit our natural resources, while the manufacturing sector constitutes just 11% of our economic activities. Namibia is a net exporter of capital, while investment in the country is very limited. Above all, Namibia produces what it does not consume and consumes a great deal that we do not produce. Most of our high-value products are for export. Numerous studies and reports have described Namibia as one of the most unequal societies in the world. This systematic underdevelopment is the persisting shadow of apartheid.

Removing that shadow is a major development challenge for the country. As noted earlier, it is against that background that the Government identified national development objectives in our First National Development Plan: reviving and sustaining economic growth; creating employment; reducing inequities in income distribution; and eradicating poverty.

These objectives constitute a national development platform and framework for Government planning and programmes. To achieve these objec-

tives, we must confront and effectively address the challenges of underdevelopment, which manifests itself in poverty, unemployment, highly skewed income distribution and the lack of basic amenities for the majority of our population. Though underdeveloped, Namibia is, however, a country with high development potential.

### **THE NATIONAL POTENTIAL**

Namibia is endowed with both human and natural resources. Our population is small but richly diverse and robust. The ancient Khoi-San cultures are a source for our national character of perseverance, endurance and adaptability. The Bantu traditions of animal husbandry, freshwater fishing and cereals production are foundations for wealth creation. The European modes of capitalist production introduced new techniques of wealth accumulation. Properly fused and cultivated, this cultural kaleidoscope has a strong potential to become a dynamic force for economic, political and social renaissance. This human potential is a source of hope and inspiration. However, for this human potential to be converted into positive energy, a new strategy of human capital development is required. This means that a new concept of education and training must emerge. Just as our vision of basic education requires us to transform the schooling that we inherited, so our understanding of Namibian development requires a transformed vision for higher education. We must conceive of education and training as an investment in socioeconomic development. Education for socioeconomic development not only recognises our rich natural resources and our equally rich human potential but also insists that education engage systematically and persistently the interconnections among knowledge, the organisation of production, social structure and democratic participation in our society. It is in that way that education and training become relevant to our national development agenda.

Namibia's natural resources are vast and diversified. Our sea provides us fish and other marine resources. The open savannahs offer the country opportunities for ranching and animal husbandry. Our fertile soils are a good basis for cereal production. Our rock formations include precious and semi-precious stones. A variety of metals are to be found at many places. Fossil fuels are found on land and off-shore. Our rich fauna and flora are sources of recreation and reflect an ancient and fascinating environmental ecosystem. Our sunny climate offers the potential for harnessing solar energy for domestic and industrial use. Our few water courses have a

potential for the development of aquaculture. Our natural potential is thus vast and differentiated. Combined with our human potential, the conditions for overcoming underdevelopment are indeed favourable.

There is, however, another potential that is equally critical to the national programme of economic development and social empowerment. This is the finance capital potential.

Although Namibia is a small economy compared to many of its neighbours, our country is, however, considered a middle-income economy. Namibia's per capita Gross Domestic Product (GDP) was N\$7 682 in 1992. That was far above the per capita income of most African countries. Moreover, Namibia is in an unusual position as an exporter of capital because of the low rate of domestic investment in the country. In 1994, the flow of Namibia's savings abroad amounted to almost 10% of the GDP. In that year, total Namibian investment abroad amounted to over N\$10 billion. Namibia's capital outflow stems from the dominance of South African financial services companies in our capital market. Because of this state of affairs, fixed investment in the country remains modest. Namibia's capital potential has not been turned into a source of economic development and the creation of employment. There is therefore an urgent need to combine the human, natural and finance capital potential in order to create conditions for economic growth and social empowerment. To do so, we must recognise the constraints and challenges that have so far mitigated against genuine development.

### **CONSTRAINTS**

We must address a number of seemingly intractable constraints. Some are natural, while others are historical or cultural. Whereas Namibia is endowed with good natural resources, we must also recognise formidable natural forces that at least initially are less conducive to our development. One such constraint is the nature of our climate. Namibia is semi-arid. Rains are unpredictable and many water sources are unreliable. Hence, we require a strong programme of water management. That programme must be accompanied by initiatives for land reclamation and reforestation. To help achieve these goals we must accelerate the development of a national science and technology infrastructure.

The historical constraints are associated with the current state of development. Our history has been a manifestation of growth without development. This means that while Namibia prides itself in its good communica-

tions and infrastructure and productive mining and fisheries, both infrastructure and production are oriented toward resource extraction and export. Most often, companies acting as branches of large transnational corporations have been primarily interested in the exploitation and export of raw materials. In that respect, Namibia is a typical branch plant economy. In this arrangement, raw materials are extracted and exported to other countries for processing. Copper, uranium, marble, semi-precious and precious stones, fish and meat are all exported as primary products. In this way Namibian products provide jobs and wealth to people outside Namibia while poverty and unemployment continue to ravage our social fabric. This historical and exploitive arrangement must be turned around. We must develop our national capacity to use what we produce and to add value to it through our own industry. That is the only sure way to create jobs, expand our national wealth and redistribute it equitably. In this process, Namibia will also create opportunities and incentives for increased domestic investment. Namibia's finance capital will then be put to use for Namibia's development. To create these conditions, we must create a technology business incubator that can help develop the needed infrastructure and that can bring people with relevant expertise into direct contact with the technology-based businesses that need their services.

The cultural constraints emanate from the training and education deficits from which the majority of the population has suffered. The intellectual potential, ingenuity, creativity and the productive capacity of the population has not been fully realised. Apartheid policies of job reservation, Bantu Education, creation of reserves for indigenous communities and economic discrimination prevented the development of our own technological capacity. The challenge in this regard is to expand the number of young Namibians who want to take up science and technology careers. At the same time, we must develop a base of scientific knowledge about Namibia's development potential and link this with a strategy for increasing the number of skilled scientific and technological professionals.

### **'CATCHING UP' LEAVES US BEHIND**

In a dependent economy like Namibia's it is tempting to try to "catch up" with countries whose infrastructure, productive capacity, trade relations and political economy generally are more developed. But if we conceive of our task as closing a development gap rather than leaping forward, we shall always be frustrated. That is so because catching up gener-

ally involves doing more of what we do and doing it more efficiently rather than doing things differently. We should, of course, seek to increase the production from our mining and our fisheries and our nascent industries. But if we continue to depend on exporting largely unprocessed raw materials and if we continue to depend on imported technology, we shall always find ourselves still behind.

To reduce our dependence we must be able to transform and add value to the raw materials that we exploit and the products that we manufacture. For that, we must be developers, not simply importers, borrowers and copiers of relevant knowledge and technology.

For Namibia to make a developmental leap, we must ourselves be able to undertake research on our resources and on how best to use them. Even more. We must be able to develop new research approaches and methodologies appropriate to our circumstances. We need then to be able to apply that research to the creation and refinement of the technologies and associated tools needed to add value to the products that we sell. Again, even more. We must be able to develop new production methods that both reduce the costs of production and increase the value of the products. We must aim not only for increased production but also for what is sometimes termed the production of production, that is, innovation in technology and production strategies. In that way, we can begin not only to expand our role in regional, continental and international trade, but more important, to begin to define the terms of our market participation in order to reinforce, sustain and accelerate our efforts.

Of course, in a small country like Namibia we will not be able to take those steps for all our products or in every economic domain. Hence, our research on our resources and potential must also help us identify areas where we have a comparative advantage and where, therefore, we should focus our energies.

### **TOWARD A NATIONAL UNIVERSITY OF TECHNOLOGY**

The Ministry of Higher Education, Vocational Training, Science and Technology envisions the creation of a National University of Technology in Namibia, expected to play the leading role in developing and acquiring technology and modifying it to suit our circumstances. Science and technology play critical roles as sources of economic productivity and competitiveness in an evolving global economy increasingly organised around information rather than the extraction of raw materials or even manufactur-

ing. In important respects, science and technology play the generative role in the information age that industrial manufacturing played in an earlier era.

For economic development in general and to create employment in particular, Namibia must convert its current reliance on mining into an economy dependent on knowledge as well as industrial production, service industries and fisheries. To accomplish that, Namibia must become an exporter as well as an importer of industrial products and their underlying technologies. That, of course, requires industrial production, initially drawing on information and technologies developed elsewhere but increasingly developed within the country. All of that, in turn, depends on our ability to develop our human capital to lead and accomplish the transition, to attract foreign investment and to secure a significant share of Africa's trade.

For that, we need a higher education institution to coordinate our efforts. That institution must be firmly rooted in research and experimentation, in practical applications in market settings and in product promotion and fund-generation. In short, to break the vicious cycle of dependence, with its resulting underdevelopment, poverty, crime and hopelessness, the National University of Technology will be a centre of innovation and adaptation, an incubator and clearing house for new technologies, new research and new products.

The National University of Technology will be a flagship institution for the enhancement of the national capacity for wealth creation through science and technology. Organised as a service institution, the new university will operate in close collaboration with the private sector, other public institutions and communities to create, deliver, install and maintain knowledge-based applications. As it does so, the National University of Technology will provide a science and technology infrastructure by creating a symbiotic relationship between academic institutions and industry. In this way, the university will function as a partner of industry involved in training, research, product development, testing, process design, market research and organisation optimisation. The science and technology infrastructure will include industrial incubators, laboratories, research facilities, product design capacity, advisory services, quality control and assurance capabilities, patents and copyrighting advisory services and support for the protection of intellectual capital.

In its training role, the National University of Technology will emphasise the integration of knowledge, science, engineering and business in a unified package. Its goal will be to educate specialists who are capable of putting

scientific knowledge to practical use in a commercial setting. Its graduates will be able to create their own jobs and at the same time generate employment for others. Its students will thus study a basic set of generic courses and practical experiences. They will also concentrate on the elements of science, engineering and business related to their fields of specialisation. In this way, we will create the capacity to recognise commercial opportunities that arise from science and technology.

The National University of Technology will also serve as a clearing house for technology acquisition, adaptation and dissemination. It will provide technology extension services and technology information diffusion. In short, the National University of Technology will provide our nation with the science and technology capability that will form the basis for a sustainable industrial system. That science and technology capability will be the cutting edge in wealth creation, expansion of employment opportunities and the redistribution of income. Science and technology will mediate our great potential in human resources, natural resources and finance capital to bring about the industrial revolution in Namibia.

To pursue these goals, the National University of Technology will develop its training, research and scholarship in integrated minerals industrial development; food technology; integrated agricultural industries; integrated drylands industrial development; integrated reforestation and desert land reclamation; integrated fishing, aquaculture and marine culture industrial development; leather, wool and pelts industries; and business development and advisory services.

In sum, the National University of Technology will promote the application of knowledge, know-how and technical skills. The principle of the scholarship of application will be central to its teaching, research and service functions. Without ignoring its intellectual roots and responsibilities, the National University of Technology will play an initiating and advocacy role in the markets for ideas, skills and products, developing symbiotic and synergistic relationships with our national industrial enterprises, spawning as well as supporting them. Thus, a National University of Technology is both a development strategy and an insurance policy for the welfare of future generations of Namibians.

## **INVESTING IN PEOPLE, DEVELOPING A COUNTRY**

We have a broad vision and high expectations for higher education in Namibia. We understand that higher education is an investment in our fu-

ture and that some of its most important results will not be fully clear for some time to come. Hence, we must invest wisely and well to ensure that learning, teaching, scholarship, research and service are dynamic, interactive and mutually reinforcing.

Our higher education system must not only review knowledge but create it. It must not only equip people to fill jobs but also to create them. It must help us not only to close the development gap but to leap forward with new ideas and practices, especially with innovations in science and technology. It must foster systematic, disciplined and critical inquiry at the same time that it engages the public and private sector in collaborating for development. It must educate a few Namibians to be of service to us all. It must be responsive to what our society demands of it and at the same time able and willing to initiate and to lead.

We have committed ourselves to four broad goals for higher education and to using them to guide the priority and resources we assign to each programme or course of study or other activity: *equity, quality, democracy and relevance*. To make progress toward those goals we will also need *effective, goal-oriented management*, which includes *affordability, efficiency and sustainability*.

We all share responsibility for supporting those goals, for assisting our higher education institutions to achieve them, and for insisting that they do.

## **Recommendations**

## **ESTABLISHMENT OF A HIGHER EDUCATION ADVISORY COUNCIL**

This Council will bring together representatives of various government and private institutions in order to promote coordination and collaboration. The goal is to develop an appropriate institutional framework for governing and managing an integrated higher education system. The Council may establish committees or working groups focused on specific domains within higher education.

## **DEVELOPING A FUNDING FORMULA FOR HIGHER EDUCATION INSTITUTIONS**

The funding formula will ensure fair resource sharing among institutions of higher learning funded by government. The formula should be based on the following principles:

- It should encourage financial and academic planning on the basis of a reasonable degree of stability.
- It should create an appropriate balance between the Government's need for funding to support national priorities and each institution's coherence and autonomy.
- It should aim for increased efficiency and effectiveness through appropriate financial incentives and disincentives.
- It should be consistent with the national targets of the Wages and Salaries Commission to reduce personnel expenditures by 2% per year over the next five years.
- It should encourage institutions to generate additional non-governmental funding.
- The formula should be simple and flexible, able to adapt to a rapidly changing higher education environment.
- It should ensure transparency and facilitate accountability in budgeting and financial management.

## **CREATION OF A PRIVATE SECTOR HIGHER EDUCATION FORUM**

It is proposed that a Private Sector Higher Education Forum be created with participants from both the private and public sectors and higher education institutions. Such a forum will create and strengthen private and

public partnerships that link higher education to the growth points of our economy.

## **ESTABLISHING A STANDING PROFESSIONAL ADVISORY COMMITTEE ON TEACHER EDUCATION**

Responsibility for teacher education is shared by a number of agencies. These include the two Ministries of Education, the colleges of education and the University of Namibia. In order to improve coordination and programme articulation, it is proposed that a Standing Professional Advisory Committee on Teacher Education be established. The Committee will advise the two Ministries on all issues relating to teacher education; ensure coordination between stakeholders and institutions and programme articulation and ensure a close relationship between pre-service and in-service curricula. The Committee should also initiate actions to improve teacher education at all levels.

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