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EDUCATION PLANNING, SYSTEMS, & STRUCTURE

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Foreword

The National Education Policy Investigation (NEPI) was a project of the National Education Co-ordinating Committee (NECC) conducted between December 1990 and August 1992. The object of this investigation was to interrogate policy options in all areas of education within a value framework derived from the ideals of the broad democratic movement.

This book is one of thirteen representing the culmination of the investigation. The series comprises twelve research reports, each covering a major educational sector, and The Framework Report, which is a conceptual and historical analysis of the NEPI processes and products. These reports do not constitute a model for a new education system, nor even a set of recommendations for a more equitable dispensation: the twelve sectoral reports are, in the first instance, an analysis of feasible options for the short- to medium-term future. Different options favour different social and economic values, which are sometimes in tension or even direct conflict with one another. The Framework Report attempts to provide a scheme or structure for balancing a variety of options.

NEPI has tried to serve three principal functions:

- ☐ the provision of information and a lens to focus on the values which underpin specific policies;
- ☐ the stimulation of public debate on education policy in all spheres of society. From the foregoing, it is clear that the NEPI reports do not present an NECC position in education; rather they mark a starting point for what will undoubtedly be a protracted debate;
- ☐ the development of capacity for policy analysis.

With the publication of these reports, NEPI has fulfilled its brief, and the more than 300 direct participants in the project will take a rest from nearly two years of intensive activity. NEPI signals a new and highly successful departure for collaborative effort amongst political leaders, academics, and practitioners. However, it would be a mistake to view the project as providing anything more than a foundation for building a more legitimate and efficient education system for a democratic and prosperous South Africa. In reaching for that future, much work needs to be done in each of the three areas outlined above.

Jakes Gerwel
Chairperson, NEPI Executive Committee

Preface

The NEPI Research Group on Planning, Systems, and Structure, including a sub-group on Administration and Control, has been responsible for investigation of both 'macro-' and 'micro-' dimensions of education planning, organization, financing, and governance, including the following broad concerns:

- ☐ the respective roles of government, communities, the business sector, and non-governmental organizations in the provision of education and training;
- ☐ government's responsibility for regulation of the education and training system, including examinations, certification, curricula, recognition and autonomy of schools and colleges, rules of access, and certification of training standards;
- ☐ responsibility for and co-ordination of financing of education and training;
- ☐ priorities for resource allocation amongst formal schooling, tertiary education, and non-formal education;
- ☐ the planning process and policy formation in education and training, and appropriate representation of organized business, labour, and the public in education policy formation.

This Report focuses on education and training systems and the structure of schooling. Aspects of education planning, finance, and management are discussed in both this and the separate report on Governance, and there are various aspects of the organization of education discussed below which are specific concerns of other research group reports. Submissions, working papers, and publications that have been consulted in compiling this report are listed in an appendix.

Abbreviations

ABE	adult basic education
AE	adult education
ANC	African National Congress
CHED	Committee of Heads of Education Departments
COSATU	Congress of South African Trade Unions
CUP	Committee of University Principals
DEC	Department of Education and Culture
DET	Department of Education and Training
DNE	Department of National Education
ERS	Education Renewal Strategy
GDP	gross domestic product
GNP	gross national product
IDT	Independent Development Trust
IEB	Independent Examinations Board
JMB	Joint Matriculation Board
NECC	National Education Co-ordinating Committee
NGO	non-governmental organization
NMC	National Manpower Commission
NTB	National Training Board
PSE	post-secondary education
SAAIS	South African Association of Independent Schools
SACOB	South African Chamber of Business
SAFCERT	South African Certification Council
SERTEC	Certification Council for Technikon Education
TBVC	Transkei, Bophuthatswana, Venda, Ciskei
USAID	United States Agency for International Development
VE	vocational education
VET	vocational education and training

1 ECONOMIC DEVELOPMENT, DEMOCRACY, AND EDUCATION PLANNING

Human development in the South African political economy

A legacy of deficient and unequal human development in South Africa has reinforced social divisions and injustice, and contributed to the deterioration of the economy. Human development is at the centre of redistributive strategies for the future growth and development of the South African polity.

Between 1965 and 1980 South African gross domestic product (GDP) grew at an average of 3.8% per year, enabling employment to keep pace, until about the mid-1970s, with growth of labour supply. During the 1980s, however, GDP growth has been about 1.3% per year, industry has hardly grown at all, and formal sector employment has stagnated. Income per capita has grown since 1965 at just 0.8% per year, compared with the weighted average of 2.3% per year for middle-income economies reported in the World Bank's *World Development Report 1990*. During the 1980s, income per capita has fallen.

Income distribution in South Africa is amongst the worst in the world. Estimates of household income distribution contained in the 1988 *Social Accounting Matrix* for South Africa indicate that the poorest 30% of the population receive about 3.5% of total household income, whereas the wealthiest 6% of the population receive some 36% of total income. An official 1991 report estimated that 16 million people, or 45% of the population, live below the 'minimum living level' of about R600 per family per month. It was estimated that of these, 2.3 million are threatened by malnutrition. In rural areas, approximately three-quarters of all households live below the minimum living level.

Economic stagnation and widespread poverty reflect the limited opportunities or entitlements which face most households. Education and training are important basic entitlements, but their contributions to life opportunities depend on other social and economic factors. Apartheid has meant racially unequal education opportunities, reinforced by other racially discriminatory social and economic strictures.

Restrictions on permanent urban settlement and the migrant labour system, for example, have led to distorted settlement patterns and artificial urban-rural linkages. These have important consequences for human development: children grow up in depressed agrarian environments, remote from the urban and industrial settings in which they will work, and the spatial distribution of schools and colleges is imbalanced in relation to urban growth and settlement trends.

These are circumstances which retard human development and reproduce the divisions and inequalities that have characterized the apartheid social order. The challenges of restoring economic growth and improving income distribution, moreover, are magnified by the scale of social and infrastructural reconstruction required. Economic recovery will be associated with rapid urbanization, replacement and renewal of infrastructure, and changes in social and cultural relations. These are costly transitions which will be fraught with political and administrative difficulties.

These substantial demands for social and infrastructural investment must accompany a drive to restore cost competitiveness of South African industry as a condition for export-oriented manufacturing growth. Investment, in order to accelerate job creation, is also urgent. These are conditions in which the scope for income redistribution through rising real wages is severely limited. Redistribution has other dimensions, however. Improved education opportunities are improved entitlements in themselves. Furthermore, education and training facilitate urbanization and occupational mobility. In the long run, education underpins improvements in productivity and earnings.

Indications of the contribution of education to growth and income distribution are provided by economic analysis. In South Africa, as in other parts of the world, studies of the relationship between education and earnings support the view that schooling is a sound investment, both for individuals and for society at large. Studies show, however, that in South Africa, lifetime earnings of people with similar educational attainments vary by race. Labour market discrimination accounts for some part of these differences, but it is evident that differences in the quality of schooling provided by racially separate education departments are an important source of racial income differences. The quality of basic schooling is particularly crucial, as this is the foundation on which later education and training rest. Raising the quality of black schooling will improve black

earnings prospects, and contribute to an improved distribution of income along with future economic growth.

The effects of education development on employment are as important as effects on earnings patterns. Manufacturing growth in South Africa since the early 1970s has not only been slow, it has also been associated with an increasingly capital-intensive structure of industrial production. It is possible that weaknesses in labour productivity associated with general deficiencies in education have contributed to the slowdown of employment growth. It is also important for sustained investment and employment creation that high-level skills and executive competencies should be promoted through good-quality secondary and higher education.

Education is associated both with occupation and with rural, urban, or metropolitan location, so that part of the measured returns to schooling comprise movements of the schooled from low-level occupations and industries and from rural areas, to high-level jobs and urban employers. Education yields returns, in other words, in association with labour market mobility and industrial skills acquisition. The earnings of African women in rural areas are particularly low in comparison with urban wages, indicating that the geographic immobility of women is an important impediment to more efficient use of human resources in the economy.

These results are consistent with the view that an improved distribution of education opportunities in South Africa will contribute to redistributive economic growth. The contribution of education to development will be enhanced, moreover, by other social and economic reforms, opening up opportunities denied to Blacks in the apartheid era.

Improving the performance of the education and training system is, in sum, important for three interrelated reasons:

- ☐ Education and training contribute to skills, productivity, and income generation in the long run.
- ☐ Education and training contribute indirectly to economic and social development through improving spatial and occupational mobility.
- ☐ Education and training are, in themselves, valuable contributions to individual, household, and community welfare.

Education and training are accordingly at the centre of redistributive growth strategies for the South African economy.

Economic strategies for growth and redistribution

Although important differences in emphasis exist, recent economic policy proposals of all major political players share a commitment to a mixed economy in which:

- ☐ growth in manufacturing will be a key element in economic recovery;
- ☐ the state will play an important co-ordinating and redistributive role; and
- ☐ both organized business and labour will play some part in economic policy formation.

It is common cause that education and training need to be revitalized as part of a long-run development strategy, that education opportunities should be non-discriminatory, and that the state should remain the major provider of schooling and should continue to subsidize higher education and training.

Differences between parties reflect varying views on the details of state intervention in the economy and in education and training. Some analysts are sceptical about the role of market forces, and advocate a comprehensive role for the state in directing investment, controlling the commanding heights of the economy, and securing a full range of social services available to all. An alternative position has it that state interventions are usually the consequence of the appeals of élites for special privileges. Such a position advocates a minimalist role for the state, limited to the provision of collective services, the co-ordination of economic policy, and the relief of extreme poverty and deprivation. Between these poles are various forms of social democracy, in which a pragmatic balance is sought between recourse to competitive markets (principally in order to secure economic growth) and state intervention (principally aimed at improving the distribution of incomes and social security).

It is widely acknowledged that the restoration of economic growth and employment creation is crucial if human development is to be sustained and poverty eliminated. Export-oriented manufacturing growth is envisaged as the key to progress by some commentators; expansion of production for domestic consumption is emphasized by others. These are complementary aspects of development, and both require sustained industrial investment and improving productivity of labour. Labour-intensive infrastructural development is likely to play some part in expanding urban residential capacity and restoring rural

development, and some job creation through redistributive social services is also possible. Education and training are important foundations for long-run economic growth, and human development strategies are critical elements in growth and development planning.

Recent studies of the redistributive options available to a post-apartheid state suggest that the key to redressing inequalities lies in redistribution within existing fiscal constraints: in education, redistribution must take place in the restructuring of education organization and financing. Furthermore, redistribution can only be sustained in the context of a growing economy, which limits, in the short term, the resources allocated to the education system. In education as in other sectors, the prospects of the poor will only be improved if the state deliberately reduces its subsidization of services, such as university training, enjoyed disproportionately by the rich.

Improved access of previously disadvantaged groups to higher education is also an important human resource goal, however. Options for affirmative action in human resource development and tertiary education have recently been examined by a Commonwealth Expert Group, and by a research team of the United States Agency for International Development (USAID). These reports point to the critically important role of human resources in the long-term development of the South African economy. Reports of the National Manpower Commission of the present government, and of private-sector bodies concerned with human resource needs, have also stressed the urgency of redressing racial discrimination in education, training, and labour markets.

Both improved general education available to all and affirmative action in higher education and training, will be key features of post-apartheid strategies for economic and social reconstruction. The planning and organization of education and training will largely be about the pursuit of those goals. An appropriate balance between improvements in general education for all and advances in higher education and training will have to be sought. The shape and course of education developments must be co-ordinated with other aspects of economic development. Issues which face government in the planning and management of education and training are discussed below. In addition, the role of institutions of civil society in ensuring appropriate human development trends is noted.

Education and development: Planning issues

Governments have responsibility for regulating the environment

within which the economy functions, and intervening to secure provision of those goods which markets do not provide fairly or adequately. In education and training, as in other sectors, various mixes of private and public provision are possible. Governments regulate and subsidize schooling in various ways, and parental and community involvement in school management can also be organized in several ways. Higher education and training are state financed in some countries and largely privately financed in others. When vocational education is privately provided, it can nonetheless be regulated by government. When colleges are publicly funded, the private sector can still play a role in management and co-ordination.

Education planning and the organization of education in its internal structure and systems are key determinants of other aspects of education policy. How schools are planned, organized, and governed determines the influences that will come to bear on the curriculum, shapes the incentives and working conditions of educators, and affects the roles parents and students will play in developing a learning environment. How training is managed, financed, and regulated determines the kinds of training that will be offered, how efficiently, in what forms, and to whom.

Governments are responsible for the planning and organization of education provision, both directly, for example through public schools, and indirectly, for example through the regulation and subsidization of private training programmes. The instruments available to government include legislation and regulation of education and training, establishment and financing of education institutions and programmes, and support for private or non-governmental education and training activities.

The reasons why education is an important aspect of public policy may be summarized as follows.

International evidence on the links between education, development, and social change confirms that societies which develop good education systems have better prospects of sustaining economic growth and improving the distribution of incomes and opportunities than societies which neglect education and training. It has been shown that economic growth in typical countries is largely attributable to increases in the education level of the labour force. This contribution is higher, on average, in countries at a lower stage of economic development than in more developed economies. School quality, as well as quantity, is important in this regard.

Macro-estimates such as these have been complemented by micro-level studies linking education to improved worker productivity and to broader socio-economic outcomes such as improved health and life expectancy and reduced fertility rates. Education is not a guarantee of prosperity, however. The effectiveness of education depends on other features of the economy. The 1991 World Development Report confirms that economic growth and productivity trends are associated with average educational attainment and the rate of increase in educational attainment of the labour force, but shows that the effectiveness of education largely disappears when, for example, foreign trade competitiveness is distorted. In South Africa, the effectiveness of education and training will depend on progress in the dismantling of the migrant labour system and other discriminatory features of the apartheid social order.

In addition to facilitating growth, progress in education contributes to other desirable socio-economic changes. Education of women contributes to the lowering of fertility rates and to improving the quality of child-care. Education contributes to social mobility; easing the movement of people from rural to urban areas and the transition from agrarian to modern lifestyles. Education is associated with awareness of environmental and health-related issues, and with development of civic and political consciousness. Education is about learning and adaptation, and provides people with the competencies needed to cope with social change. An important function of schooling is to engender habits of discipline, order, and diligence. Indeed it is a critical aspect of democracy that there should be civil checks on the state's command of the socialization function of the education system.

For all these advantages, education remains just one of many government responsibilities. Progress in education without industrial investment and employment creation brings social discord, frustration, and ultimately the erosion of the resources on which education itself depends. Education expands in growing economies, furthermore, partly because governments expand education provision, and partly because private spending on education and training increases with growth. Education brings substantial rewards to beneficiaries, which fuel both private demand for education and pressures on the state to provide or subsidize education opportunities. Thus governments confront hard choices about priorities for resource allocation to education and training.

Allocation priorities in education

Although international evidence supports a number of general findings on education in developing countries, circumstances differ between various countries, and priorities for resource allocation vary accordingly. General implications of the international experience are summarized below. These findings serve as a point of departure for the assessment which follows of options for education system change in South Africa. However, these must be read as tentative guidelines, the implications of which require critical examination in the particular context of the South African political and socio-economic transition.

There is widespread agreement that the availability to all of good-quality general schooling is a high priority for both economic growth and redistribution. A sound introductory education is a basic human right for its intrinsic value, and a primary entitlement because it is the foundation on which so many further opportunities for human development and self-realization rest. This presumption, codified in the Universal Declaration of Human Rights and repeated in numerous national and international statements of policy and principle, is reinforced by well-established empirical evidence from developing countries. The returns to basic education in the form of enhanced lifetime productivity, employment, and earnings typically outweigh returns to other forms of investment.

A dynamic society needs, nonetheless, a growing pool of professional and specialist leaders, managers, and innovators at the forefront of cultural, economic, and political change. It is evident also that the quality of general secondary and higher education, which should be available to a growing proportion of primary-school leavers, is as important for development as the quality of universal basic schooling. The content, accreditation, rules of access, and financing of secondary and higher education vary between countries, and relate to several dimensions of the socio-economic context. When higher education confers substantial advantages in the labour market, for example, it can be partially privately funded. When labour markets are characterized by pervasive credentialism, it is important that uniform standards of accreditation be maintained. There are also critical international linkages — cultural and technological — which can be fostered through higher education.

The challenge of providing good-quality schooling is partly one of allocating sufficient resources and partly one of using these

resources efficiently. Schools and colleges are not always efficiently managed or organized, and the bureaucratic lines of control which characterize education departments can inhibit progress towards internal allocative efficiency. International evidence suggests that, among other things, the following are important elements in improving the quality of schooling:

- ☐ effective school administration;
- ☐ availability of books and other teaching aids, including improved educational technology;
- ☐ curriculum development and adaptation;
- ☐ content of teacher training and in-service support;
- ☐ good relations between school and community;
- ☐ school-readiness or pre-school programmes;
- ☐ nutritional support of infants and school children.

As these are comparatively low-cost interventions, and as they are often neglected aspects of education systems, there can be considerable scope for cost-effective internal reorganization of the provision of schooling in developing countries. Improving productivity in schools involves, furthermore, encouraging the work effort of students, rewarding teachers for good teaching, strengthening school administration, and promoting research, design, and adaptation in schooling. The structure of education opportunities and examination and certification systems, the organization and remuneration of teaching, the flexibility of curricula, and the relative autonomy of school principals and governing bodies are some of the determinants of productivity-related incentives within the education system.

While schooling contributes in the long run to developing a prosperous economy, effective adult education (AE) yields its returns immediately and is often closer to the changing needs of individuals and groups than formal education. Although the organization of AE is difficult as it needs to be responsive to divergent and shifting demands, it is an important and rewarding field. The Latin American experience suggests that non-formal adult education, often privately or non-governmentally provided, can partially compensate for deficiencies in public schooling. An important role for the state in regulation of standards and institutional co-ordination remains, even when provision is largely private. Technical and vocational education are critical elements in industrial development and in sustained economic progress. Close co-ordination between work requirements and the content of vocational education and training (VET) is vital,

and thus there are limits to the role of vocational content in schooling. It is widely acknowledged that skills training and formal vocational development should rest on good-quality general education, that flexibility in VET is important, that on-the-job training is often more cost-effective than formal vocational training, and that the testing and certification of specific skills serves an important information function in labour markets. Financing arrangements must depend on other aspects of public finance, the distribution of income, and the structure of benefits associated with different types and levels of education.

As education is associated with both income prospects and access to high-level occupations, government spending on education can reinforce inequality. The distributional impact of education depends strongly on the balance between state spending on basic schooling, and subsidization of higher education and other forms of education and training, and on the extent to which financial differentiation facilitates access of the poor to education opportunities. International evidence indicates that education is an arena in which the pressures of special interest groups on government can lead to inequalitarian financing arrangements, favouring the privileged rather than the poor. Unsustainable state financing of ambitious education and training initiatives can also have perverse consequences for both distribution and growth.

Recent international research has focused on the importance of qualitative improvements in education in developing countries. It has been suggested that education reform programmes in developing countries often neglect the administrative environment into which innovations are introduced, and emphasize curriculum change and dissemination while neglecting school governance. More successful change programmes, it has been argued, aim at comprehensive change, with an emphasis on phased implementation strategies coupled with intensive testing, experimentation, and learning from experience in the early stages. Strategies focus less on curriculum change than on a broad range of objectives reflecting the complexity of the process of change in education. While curriculum reform and teacher training are of continued importance, a multi-pronged, long-term approach which includes the strengthening of administrative and managerial capacity both in education departments and at the school level is advocated.

The following analysis seeks to identify options for long-term, system-wide education development in the key policy challenges of

upgrading basic general schooling, expanding higher education opportunities, and improving vocational education, training, and AE programmes.

Economic democracy and education planning

Apartheid has been as much about the abuse of institutions of government by a self-seeking racial minority as it has been about the repression of rival and non-racial tendencies in civil society. The decline of the apartheid state, however, has been characterized by the emergence and strengthening of various organs of civil association: the rise of a large and well-organized non-racial trade union movement; the regrouping and consolidation of professional, business, and employer organizations; the flowering of a broad range of environmental, development, and human rights bodies; the growth of welfare organizations; the re-forming of national sports bodies; and the rise of local and regional civic structures.

The functions of these organs of civil society are complex and diverse. They provide a counter to the hegemony of the state, monitoring the delivery of social services and contributing to the organization of public affairs. Civil organizations put pressure on government, thereby influencing the patterning of public policy and resource allocation. Excessive demands on the state, driven by the growth of popular pressure groups, can lead to unsustainable state spending, and, in extreme instances, political and economic crisis. On the other hand, civil organs supported by the rule of law can play an important complementary function to both the state and the markets in the revitalization of a depressed economy. Civil society also has a 'watchdog' role in keeping a check on repressive and corrupt tendencies in state bureaucracies.

Development economist Michael Lipton suggests that economic development flounders in the absence of effective civic organizations (Lipton, 1991:21): '... African experiences ... testify to a "State-market dilemma" in early economic development: both State and market must increase in power, yet as each does so it tends to weaken or subvert the other. In most cases, only institutions of public overview, some self-seeking and others not, able to interact freely through "civil society", can inhibit such weakening and subversion, soften the State-market dilemma, and permit sustained economic development'.

Such a 'dilemma' faces education planners and decision-makers

in South Africa. Private-sector finance and management in education and training are needed for the flexibility, dynamism, and local accountability they bring; but privatization threatens to undermine state co-ordination and restructuring of education opportunities. Lipton points to the resolution of this dilemma: 'institutions of public overview', neither of the state nor of the market, but at the interface between them, have a critical role to play in securing overall balance and coherence in education policy. Structures of education planning, system organization, and financial overview need to be sought which will bring together, and mediate between, the several social sectors — administrators, teachers, students, citizens, employers, workers — with interests in education and training. Institutions of governance need to adjudicate between the demands of fairness or equity, and of productivity and efficiency, in education planning and resource allocation.

Institutions of 'economic democracy' are being forged in South Africa in the process of political transition. These include the formation of a national economic forum; a restructured National Manpower Commission (NMC); a National Training Board (NTB); and various other bodies on which labour, employers, and government, amongst other parties, will be represented. The powers, responsibilities, and procedures which will be associated with these bodies are critical, and it is likely that a lengthy period of institutional evolution will accompany this reorganization of economic decision-making. Various bodies such as the National Education Co-ordinating Committee (NECC) have identified the urgent need for national, regional, and local institutions of public accountability and responsibility for schooling and other education activities.

Reorganization of policy-making powers in the wider political economy will affect aspects of social policy-making such as education and training. Indeed, progress with human development in South Africa requires breaking the stranglehold on education policy of a white bureaucratic fraternity bound to a ponderous pedagogical tradition and a narrow ideological vision. Access to education policy-making needs to be opened to representative employers, organized labour, the teaching profession, other civic organizations and, at the school level, parents, teachers, and students.

This democratic thrust to the reorganization of education and training is a presumption of the policy analysis that follows.

2 PRESENT EDUCATION PLANNING, SYSTEMS, AND STRUCTURE

A divided system

Education in South Africa is marked by severely discriminatory inequalities of provision. These inequalities coincide with ethnically fragmented structures of control centred on 'own affairs' departments of education answerable to the white, Indian, and coloured chambers of the tricameral parliament, while African education falls under the Department of Education and Training (DET) and a further ten departments responsible for education in 'homelands'. The Department of National Education (DNE) plays an overall co-ordinating role. In all, the South African education system comprises fifteen separate departments of education, linked through weak co-operative arrangements and separated by marked resource imbalances.

In addition to departmental fragmentation, there are differing financing arrangements and regulations affecting various classes of education institution: departmental, state-aided, and private schools; technical and teacher-training colleges; and technikons and universities. There are various vocational training institutions and programmes, some of which fall under the Department of Manpower and its various training boards, and some of which are unregulated and not subsidized.

In terms of the 1984 National Policy for General Education Affairs Act (No. 76 of 1984), the DNE has overall responsibility for establishing norms and standards for the financing of running and capital costs of education institutions for all 'population groups'; for determining the salaries and conditions of staff employment and the professional registration of teachers; and for setting norms and standards for syllabuses, examinations, and certification. The various tricameral departments of education execute general policy, set policy in respect of 'own affairs', and provide education. The DET liaises with education departments in the self-governing states while communication with Transkei, Bophuthatswana, Venda, and Ciskei (TBVC) departments is routed through the foreign affairs departments of South African and TBVC governments.

The 1984 Act was passed before the tricameral parliament was established. The Act states that the Minister of National Education is

obliged to 'consult' with the Ministers of Education in the various houses and with the South African Council for Education, but the Minister is not bound by such consultations. However, in determining norms and standards for the financing of education, including salaries and conditions of service of staff, the Minister may act only 'with the concurrence' of the Minister of Finance. Coupled with the dominance of the House of Assembly in the tricameral parliament, these provisions ensure that ultimate power, including the power of the purse, remains with the white-controlled central government.

State policy, although founded on a strong belief in centralized control, rests on a deeply fragmented structure, and is accordingly shot through with contradictions. Homeland education departments have varying degrees of autonomy and organizational capacity, and the very multiplicity of education departments has provided space for diverse interests and influences to operate in the education arena. Consequences of ineffective control include abuse of power, fraudulent use of funds, and widespread managerial slack within education departments. There are, furthermore, substantial differences between regional departments in the quality, content, and availability of black schooling.

The need within the present education structure to balance two sets of conflicting and ultimately irreconcilable notions — those of 'own' versus 'general' affairs, and of 'separate but equal' provision — has resulted in uncertainty and confusion, and has undermined the effectiveness of the system. These contradictions account for much of the division, lack of clarity, and indecision in government thinking and action on education issues.

Stalled reform

The current education dispensation is in large measure the product of 'stalled reform'. The key period was 1980–1984, beginning with the appointment of the De Lange Commission and culminating with the 1984 Act.

Since 1984 there has been no fundamental change in education policy. While there have been adaptations and indeed a crumbling of the overall system, we are still living with the contradictions embedded in the reforms of that period, and there remain interests within the bureaucracy committed to perpetuating racial fragmentation.

The terms of reference given in the HSRC investigation placed strong emphasis on the economic purposes of education and on efficiency within the structure of organization and control, while pointing, in the use of terms such as 'quality of life', 'self-realization', and 'equality in education', towards a reformist orientation. However, the main Report of the De Lange Commission was the product of bargaining and compromise within the Commission, and the outcome was vague in several key recommendations and open to alternative interpretations: for example, on whether local school governing bodies should cut across ethnic residential areas or not. The process of translation into government policy led to further dilution of the Commission's views.

Government policy has turned out to be more concerned with survival than reform. It has resulted in arbitrary decisions, tensions between National Education and the Department of Education and Culture of the House of Assembly, and a general 'muddling through' which has exacerbated the crisis in education, particularly in the African sector. Attempts to pacify white right-wing protest by strengthening the group base of education and reinforcing segregation have accompanied attempts at meeting at least some of the demands of extra-parliamentary political and community groups.

Government since 1984 has sought to manage the implications of its broad policy decisions via its control over the financing of education. Charged with implementing a deeply contradictory policy, the Minister of National Education, with the concurrence of the Minister of Finance, moved initially in the direction of 'equal but separate' provision, with the introduction in 1986 of a Ten-Year Plan and a new financing formula. It soon became clear that parity would not be attained within the ten-year period and within three years the plan had been shelved in the face of fiscal constraints.

There has, nonetheless, been some movement towards more equitable state financing of schooling. White education took up over 50% of education spending in 1983, with per capita spending on white pupils about eight times the spending on African pupils. White education in the early 1990s is about 30% of the education budget and the White–African per pupil spending ratio is about 3:1.

Since February 1990 the state's reform effort has concentrated on the shoring up of local control of white suburban schools. The House of Assembly Department of Education and Culture (DEC) offered schools first a selection of four management 'models', requiring virtually unanimous parental approval for change from the status quo. By

1992, the Department was encouraging schools to move to a 'state-aided' status, with teacher salaries paid by government and all other costs to be covered by fees and other sources. Schools remaining 'status quo' will be required to reduce their teaching establishment. These reforms do not fundamentally alter the fragmented structure of the school system, but add the new dimension of semi-autonomous local school governing bodies, likely to approach desegregation and local management in varying ways. Privatization and decentralization enable the state to reduce its subsidization of privileged schools, but also allow policy-makers to avoid commitment either to a non-racial system or to equalization of education opportunities.

Neither shifts in government policy nor concessions in departmental practice have lifted the abysmal quality of schooling for the majority of South African children. Low levels of morale and professional responsibility among teachers, inappropriate and under-supplied books and other teaching materials, irresponsible behaviour by students, a collapse of the culture of learning, and the large-scale breakdown of authority and efficiency mean that schools, far from contributing to the urgent and daunting tasks of social reconstruction, have themselves become a critical part of the problem.

Poverty and privilege in South African education

School attainment and achievement

The absolute inadequacy of black schooling, and the privilege of white education, have many dimensions, qualitative and quantitative. As a consequence of past neglect, less than half the African population aged 20 years and older can be considered literate. As a consequence of present trends, racial inequalities associated with education will remain deeply rooted for at least another generation.

While the educational attainment of Whites, an average of thirteen years, is amongst the highest in the world, attainment for the adult population as a whole averages only seven years. The average five years of schooling amongst adult Africans is not enough to secure literacy or provide a proper base for further education and training.

Current school statistics indicate that, at the beginning of the 1990s, African children spend an average of eleven years enrolled at school. Average attainment of school-leavers, however, appears to be no higher than Std 7 (or nine years). African schooling is character-

ized by high rates of absenteeism and repeating, which lower the average attainment, and by weak and deteriorating standards of attainment. White schooling, on the other hand, achieves high rates of retention through to Std 10 (the final year) and a majority of white children go on to higher education or formal vocational education.

Total education enrolments by race in 1990 are presented in Table 2.1.¹ As is indicated, African and coloured enrolment in Sub A exceed the age six population totals by about 50%, indicating very high repeating rates in this grade. Total African and coloured primary school enrolment exceeds the corresponding age cohort. At secondary and higher levels, however, and in special schools, education colleges, and technical colleges, black enrolments are well below those of white proportions of the population.

In Table 2.2, the regional distribution of DET and homeland school enrolment is summarized. The DET enrolls lower proportions of the regional African school-age population than homelands, reflecting the past apartheid policy of restricting services for Africans in white areas. The figures indicate that access to secondary schooling varies greatly, and is highest in the Transvaal homelands and lowest in the Transkei and Natal-Kwazulu region.

Some indications of educational attainment by race are given in Table 2.3. While 80% of white and Indian pupils entering school may be expected to complete Std 10 and pass the senior certificate school-leaving examination, only 20% of coloured and African children do so.

Senior certificate results for the 1980s, including the TBVC homelands, reveal that large annual increases in the number of African Std 10 pupils have not been accompanied by increases in the number of passes. Matriculation exemption results, representing the minimum senior certificate attainment required for entry to university, provide a more stringent measure of performance of the various education departments. African matriculation exemptions have remained below the output of the white education departments in absolute terms, despite an increase in the number of candidates from about 100 000 to more than 250 000. Examination results for 1990 show that just 29% of African matriculation candidates obtained an E aggregate (an average mark of 40%) or higher. Almost half the candidates failed the examinations with aggregates of less than 30%. The number of African matriculation exemptions was 21 025, or 8.2% of enrolments in 1990. White exemption rates, on the other hand, have consistently exceeded 40%, or about 27 000–29 000 candidates, during this period.

Table 2.1: Education enrolments by race in 1990

	African	Coloured	Indian	White	Total
Estimated 1990 school-age population					
age 6	813 500	75 000	21 100	79 500	989 100
age 6-12	5 103 000	499 800	140 400	535 600	6 278 800
age 13-17	3 091 400	363 100	102 400	421 800	3 978 700
Total 6-17	8 204 400	862 900	242 800	957 400	10 257 500
Pre-primary class enrolment					
	103 000	24 000	15 000	53 200	195 000
% of age 6 pop	13%	32%	71%	67%	20%
School enrolment					
Sub A	1 220 000	110 000	22 000	85 000	1 437 000
% of age 6 pop	150%	147%	105%	107%	145%
Primary	5 640 000	612 000	141 000	540 000	6 933 000
% of 6-12 pop	111%	122%	100%	101%	110%
Secondary	2 027 000	229 000	92 000	383 000	2 731 000
% of 13-17 pop	66%	63%	90%	91%	69%
Special Schl	10 000	7 000	6 000	15 000	38 000
% of 6-17 pop	—	1%	2%	2%	—
Total	7 677 000	848 000	239 000	938 000	9 702 000
% of 6-17 pop	94%	98%	98%	98%	95%
Technical college enrolment					
	13 000	5 000	6 000	49 000	73 000
% of 13-17 pop	—	1%	6%	12%	2%
Teacher-training college enrolment					
	49 400	7 600	700	9 500	67 200
Technikon enrolment					
	17 800	6 900	5 900	53 800	84 400
University enrolment					
	111 300	18 100	18 800	153 800	302 000
TOTAL	7 868 500	885 600	270 400	1 204 100	10 228 600

Table 2.2: DET and homeland school enrolment by region in 1990

	ENROLMENT			% OF SCHOOL-AGE POPULATION		
	Primary	Secondary	Total	Primary	Secondary	Total
DET REGIONS						
Cape	263 359	84 158	347 517	92.2%	42.2%	71.6%
Diamond Fields	154 772	41 667	196 439	93.0%	39.6%	72.3%
Highveld	278 601	109 751	388 352	107.7%	59.1%	87.4%
Johannesburg	150 400	75 893	226 293	96.2%	65.5%	83.1%
Natal	190 143	45 270	235 413	95.7%	33.0%	70.1%
North Transvaal	190 647	72 913	263 560	107.7%	58.4%	87.3%
Orange Free State	194 960	61 416	256 376	101.8%	47.5%	79.9%
Oranje-Vaal	225 964	77 852	303 816	116.7%	61.5%	94.9%
DET TOTAL	1 648 846	568 920	2 217 766	101.3%	50.6%	80.6%
HOMELANDS						
Gazankulu	234 602	84 065	318 667	167.8%	117.2%	150.7%
KaNgwane	165 181	61 628	226 809	156.6%	102.5%	137.0%
KwaNdebele	94 019	47 107	141 126	85.3%	69.9%	79.4%
KwaZulu	1 166 695	374 176	1 540 871	113.9%	62.6%	95.0%
Lebowa	609 861	319 182	929 043	120.8%	116.4%	119.2%
QwaQwa	66 823	40 173	106 996	134.8%	135.1%	134.9%
Transkei	908 126	190 014	1 098 140	118.3%	45.7%	92.8%
Bophuthatswana	408 666	167 527	576 193	86.2%	59.9%	76.5%
Venda	153 897	77 933	231 830	123.7%	115.9%	121.0%
Ciskei	182 277	73 179	255 456	105.2%	73.8%	93.8%
HOMELANDS TOTAL						
TOTAL	3 990 147	1 434 984	5 425 131	114.9%	73.1%	99.8%
TOTAL	5 638 993	2 003 904	7 642 897	110.5%	64.9%	93.3%

In Table 2.4, the regional breakdown of African senior certificate results, averaged over the 1987-90 period, is presented. Overall, approximately 40% of African children now reach Std 10, about half of these pass the senior certificate examination, but under 15% of candidates (or about 5% of all school-leavers) attain the standard required for admission to higher education. Whereas about 40% of

Table 2.3: Educational attainments by race in 1989/1990

	African	Coloured	Indian	White	Total
Std 10 examination results: 1990					
No. of candidates	255 498	22 315	14 542	68 097	360 452
	71%	6%	4%	19%	100%
Senior certificate passes	93 862	17 721	13 815	65 255	190 653
	49%	9%	7%	34%	100%
Matric exemption	21 025	4 487	6 614	27 986	60 112
	36%	7%	11%	47%	100%
Pass rate	37%	79%	95%	96%	53%
Matric exemption rate	8%	20%	46%	41%	17%
Technikon diplomas awarded: 1989					
	624	646	636	8 321	10 227
	6%	6%	6%	82%	100%
University degrees and diplomas awarded: 1989					
	9 595	4 185	2 481	29 167	45 428
	21%	9%	6%	64%	100%

the population of school-leaving age successfully complete secondary schooling in the northern Transvaal homelands, under 15% pass Std 10 in the Transkei and KwaZulu, and under 10% in several DET regions. High success rates as a proportion of the population, however, appear to be the consequence of high enrolment in secondary schooling rather than high pass rates in the senior certificate examination. The growth in numbers enrolled for the school-leaving examination in Lebowa during the 1980s, to over 100% of the annual age-seventeen population, has been accompanied by a fall in success rates.

The key subjects Mathematics and Physical Science provide a critical indicator of the quality of African secondary schooling. In 1988 just 853 passes in Mathematics and 1 253 passes in Physical Science at the higher grade were recorded, or about 5% of candidates for these subjects and under 1% of all candidates. Higher grade pass rates of under 15% of candidates writing Mathematics, Physical Science, Biology, and History were recorded in 1989.

Table 2.5 presents some indications of trends in enrolment in training between 1985 and 1990. Although a comprehensive break-

down of training activities is not possible given the complexity of the field, it is evident that formal vocational education is underdeveloped and employers rely heavily on industry-managed courses, tailor-made to specific occupational requirements. Much of this is informal and uncertified. Formal vocational education is still largely the preserve of Whites, and is heavily concentrated in a limited number of metropol-

Table 2.4: DET and homeland Std 10 examination results: 1987 to 1990 — average numbers of candidates, passes, and matriculation exemptions; average passes as % of 1990 age-17 population

	Candi- dates	Passes	Matric exemption	Pass rate	Matric rate	Passes/ age-17 population
DET REGIONS						
Cape	5 103	2 125	505	41.6%	9.9%	5.2%
Diamond Fields	2 484	1 192	226	48.0%	9.1%	5.8%
Highveld	10 344	4 110	985	39.7%	9.5%	10.7%
Johannesburg	6 691	2 007	400	30.0%	6.0%	8.3%
Natal	3 132	1 411	470	45.1%	15.0%	4.9%
North Transvaal	6 028	3 323	975	55.1%	16.2%	12.7%
Orange Free State	3 752	1 592	356	42.4%	9.5%	6.2%
Oranje-Vaal	5 221	2 633	651	50.4%	12.5%	10.7%
DET TOTAL	42 753	18 394	4 569	43.0%	10.7%	8.0%
HOMELANDS						
Gazankulu	10 046	5 229	1 479	52.0%	14.7%	41.5%
KaNgwane	6 502	3 024	690	46.5%	10.6%	27.6%
KwaNdebele	5 199	2 107	449	40.5%	8.6%	16.9%
KwaZulu	32 563	15 452	3 898	47.5%	12.0%	14.1%
Lebowa	45 911	18 851	4 626	41.1%	10.1%	38.8%
QwaQwa	4 469	1 863	394	41.7%	8.8%	33.6%
Transkei	17 342	8 145	2 696	47.0%	15.5%	11.1%
Bophuthatswana	17 778	10 369	2 958	58.3%	16.6%	20.1%
Venda	10 493	5 578	1 538	53.2%	14.7%	47.2%
Ciskei	6 824	3 924	1 059	57.5%	15.5%	21.7%
HOMELANDS TOTAL						
TOTAL	157 126	74 542	19 787	47.4%	12.6%	21.0%
TOTAL	199 879	92 936	24 357	46.5%	12.2%	15.9%

Table 2.5: Enrolment in certain training activities: 1985–1990

	1985	1990	% change
Apprentice contracts in operation	33 753	24 448	-28%
Adult trade trainees	523	382	-27%
Regional training centre trainees	15 750	31 650	+101%
Private training centre trainees	129 759	166 061	+28%
Private training schemes	155 562	85 033	-45%
Training of unemployed persons at regional centres	12 612	106 562	+745%
TOTAL	347 958	414 136	+19%

itan technikons and technical colleges. As is characteristic of higher education, progress with the deracialization of vocational education and training has been constrained during the 1980s by the poor scholastic background of black trainees. The weak state of the economy, furthermore, has inhibited private training, and by far the most dramatic growth has been in the training of unemployed persons in departmental regional training centres. The effectiveness of this training, however, is uncertain.

South African education is, in sum, characterized by racial and regional inequities of quality in basic schooling and of access to post-basic education and training. Racial imbalances in access to higher education, VET, and in the labour market are in part the consequences of inequalities in basic education. The school system now accommodates almost all school-age children, but the standards of education attained by large proportions of school-leavers are deficient both as the foundation for further education and for the world of work.

School structure, certification, and qualifications

South Africa's twelve-year school structure comprises a seven-year primary and a five-year secondary phase in most departments, the exceptions being Transkei, Bophuthatswana, and the House of Delegates, where a six-six breakdown is made. Although examinations are conducted and certified by some departments at the end of the primary (Std 4 or 5) or junior secondary (Std 7 or 8) phases, only the Std 10 senior certificate examination is nationally validated and enjoys currency in labour markets and as a screen for further education and training.

Furthermore, the senior certificate examination serves both as a general norm-referenced school-leaving standard and as a matriculation examination through which entry to university is regulated. Examinations are conducted by departmental examining authorities, subject to validation by the Joint Matriculation Board (JMB). A 1986 Act saw the establishment of the South African Certification Council (SAFCERT) and the Certification Council for Technikon Education (SERTEC), 'to ensure that corresponding certificates in fact do represent the same standard of education and examination'. The JMB has become a sub-committee of the Committee of University Principals (CUP), and universities and technikons are increasingly setting their own admission requirements for specific courses, based still on senior certificate results.

Among the consequences of recent changes are the following. Whereas in the past universities exercised considerable influence over the school curriculum through the JMB, the administration now has effective control of the curriculum through SAFCERT. The legislation, furthermore, allows bodies other than state institutions to conduct examinations, which has made it possible for the South African Association of Independent Schools (SAAIS) to create an Independent Examinations Board (IEB).

In practice, curriculum change is a cumbersome and difficult process as the bureaucracy requires consensus among the various departments. The process is dominated by the white DEC, which has the largest and most experienced administrative staff. Changes in the examination system provide some scope for innovation and renewal, but the new structure effectively limits such reform to the private or independent school networks.

The most serious deficiency of the present system is that approximately three-quarters of children, who do not reach or pass Std 10, leave the school system without a certificate of externally validated currency.

In respect of VET, there has been progress in recent years with the standardization of post-secondary courses conducted principally by technikons. Some 350 course curricula are available, covering a wide variety of occupational groups. Technikons cater to a small proportion of school-leavers, however, and are not extensively involved in skills training of middle-level employees. Traditional artisan training and trade testing have stagnated with the state of the economy, however, and the vast majority of industrial and commercial employees have no formal vocational qualifications.

Unequal and inadequate school resources

The imbalanced distribution of resources for schooling in South Africa is the primary cause of unequal school attainment and achievement. A review of the evidence shows that even within black schooling:

- ☐ higher levels of per capita spending lead to improved flows through the school system;
- ☐ higher average teacher qualifications are associated with better school performance;
- ☐ better departmental and school-level administration leads to improved schooling;
- ☐ better school facilities and teaching materials contribute to the quality of education.

Some dimensions of inequality in school resources are reflected in Table 2.6. In view of the international evidence of the importance of 'non-teacher' inputs, such as books and curricular materials, as a determinant of the effectiveness of schooling, the inadequacy of supplies and services to African schooling is undoubtedly a major deficiency of existing provision.

These figures mask, however, considerable variation between and within the various African education departments. It is evident, furthermore, that school quality is only partly a consequence of available resources, and depends also on organizational and human dimensions, discussed below.

Table 2.6: Inequalities in school resources in 1990

	African	Coloured	Indian	White
Pupils per teacher:				
Primary	45.0	25.5	23.9	17.4
Secondary	30.9	18.6	16.3	
Pupils per classroom:				
Primary	51.0	25.6	29.3	not
Secondary	40.7	22.6	26.8	available
Textbooks per pupil:				
Primary	<2	2	8	8
Secondary	<4	4	8	12
(estimates)				
Spending on teaching materials per pupil:	R30	R200	R300	R500
(estimates)				

School administration

One of the casualties of apartheid schooling has been the authority of the school principal. Along with the demise of the principal's status, bantu education disempowered local school committees and church bodies involved in African schooling, and departmental administrative support services which filled the vacuum have proved to be singularly ineffective.

It has been argued by several writers that schools which succeed, even in the demoralizing conditions of rural homeland areas, are characterized by dynamic school principals capable of maintaining discipline and order, perhaps backed up by religious or ideological breaks with the numbing strictures of departmental regularities. It may well be that poor school administration, from the organization of timetables to the review and promotion of teachers, is the single most important cause of inferior schooling in South Africa.

School administration is also a dimension in which there are striking inequalities across departments. The typical white suburban school is served by a network of committees and subcommittees, involving teachers, parents and trustees, responsible for a wide range of support functions, and is also monitored and supported by a strong departmental administration. Township and rural schools are unlikely to have functioning school committees, principals often carry substantial teaching loads in addition to a range of petty bureaucratic functions, and departmental support seldom amounts to more than cursory annual inspections.

Although they comprise a substantial majority of the teaching establishment in all education departments, women are extraordinarily poorly represented in senior departmental administrative positions and among school principals. There are, moreover, clear functional biases in the promotion of women to senior positions, for example in managing early childhood education and in psychological services.

As the departmental inspection or advisory function in black education has been closely identified with enforcement of a rejected curriculum, it has been a target of organized opposition in recent times. The ideological bankruptcy of apartheid schooling has made institutions underpinning administrative accountability largely unviable.

Teacher qualifications and teacher education

A major constraint on the rapid qualitative and quantitative upgrad-

ing of schools is the poor quality of training of many black teachers. While less than 1% of teachers in the white education departments falling under the House of Assembly lack post-matriculation training, at least 30% of DET and homeland primary teachers are in this category. The proportion of teachers with at least three years of post-matric training exceeds 96% for white and Indian teachers, and accounts for just over half of all coloured teachers but only 26% and 22% of DET and homeland teachers respectively. Unfavourable teacher-pupil and pupil-classroom ratios in black schools greatly exacerbate this situation.

The fragmentation of the education system has meant that no validation of teacher-training standards and certification exists, and informal evidence suggests that there are considerable differences between various teacher-education colleges. The state has, over the years, closed down white training colleges in response to the increasing role of universities in training white teachers, thereby foregoing the obvious cost-savings and quality advantages of deracializing and expanding established institutions. Black teacher-training colleges are also rigidly controlled and under-funded relative to white institutions, and in several instances are located in dilapidated premises in remote rural areas, to which competent lecturing staff cannot be attracted.

Much of the state's education 'reform' initiative of the post-1976 period has gone into upgrading the formal qualifications of teachers. The University of VISTA, located in a number of metropolitan townships, enrolls some 20 000 teachers studying part-time. Teachers face strong remunerative incentives to improve their qualifications. Evidence of the effectiveness of formal qualifications in improving teaching skills, however, is scant, and non-formal in-service teacher training and support services are largely lacking. It seems plausible, furthermore, that in the context of a demoralized and badly administered school system, teachers have tended to neglect teaching responsibilities in favour of advancing their own qualifications and careers.

Auxiliary services

General policy and advisory services, setting of norms for capital spending and financing, broad curriculum regulation, and accreditation of examining authorities are services provided centrally by the DNE. School support services and departmental auxiliary services,

including administrative support to schools, are provided by the regional and ethnic departments.

Education support services are accordingly fragmented along lines that bear little relation to spatial and functional divisions: schools within the same area may be receiving visits from inspectors or subject advisers of four or five different departments, and may teach Geography or Social Study syllabuses adapted to local conditions in several different ways.

Furthermore, schools located in low-income townships and rural areas, where the capacity of parents and the community to provide ancillary and administrative support is weakest, are served by far thinner support services than white suburban schools. Libraries, sporting facilities, guidance and psychological services, testing, and curricular support are all chronically underprovided in black education.

The education system provides for little articulation among education institutions. Universities seldom have formal obligations or commitments to supporting local schools, and technical or teacher-education colleges seldom provide facilities or services to other education institutions.

Against the background of deficient state services, an increasingly important role is played by private or non-governmental agencies in curriculum development, supplying books and other materials to schools, providing in-service teacher education, and in general school upgrading. Extraordinary constraints on involvement of non-departmental agencies in black schools existed in the past, but recent years have seen some encouragement by state departments of such support services or activities.

Pre-school educare

Early childhood education is partially subsidized by some education departments, local authorities, or welfare departments, but support is highly uneven and inadequate. Whereas perhaps half of all children in Lebowa or QwaQwa spend a year in a pre-school class, the proportion is under 1% in Transkei or KwaZulu. Overall, about 6% of three- to six-year-old children are enrolled in subsidized pre-primary classes or schools, and the level of subsidy ranges from about R100 per child in the DET to over R1 500 per child in white schools. Private facilities, non-governmental organizations, and voluntary activities within communities account for a wide variety of pre-school education, and networks of training and support services have strengthened in recent

years. Pre-school educare remains thoroughly inadequate in availability and quality, however, undermining both the quality of home-based learning and primary schooling of all except a privileged minority.

Farm schooling

Farm schools are the most disadvantaged component of the education system. Farm schools account for approximately 27% of DET enrolments and 25% of DET teachers in the 'white' areas of South Africa. Such schools, often very small one- or two-teacher concerns, operate predominantly at the primary level, with almost 45% going only as far as Std 2. Prior to 1984, not a single farm school proceeded beyond Std 5; children wishing to attend a secondary school were obliged to move to the urban areas or to the homelands. As recently as 1989, farm schools accounted for under 9 000 secondary pupils, or under 2% of the total. Four out of five of these pupils were in Stds 6 or 7. Official estimates indicate that 36% of the six to fourteen age group, and 44% of the six to nineteen age group, are not at school.

Pupils, teachers, and parents are to a considerable extent at the mercy of the farmer on whose land the school is situated and who is both employer and school manager. Schooling becomes, in view of the ways in which farm schools are financed and managed, an instrument of social control at the disposal of farmers. Education falls far short of being a legal entitlement of black farm children.

Schooling in homeland areas and informal settlements

Schools in the homelands account for a disproportionately large number of school-going children, although school resources in the homelands are generally inferior to black schools under the DET. Within homeland areas there are considerable variations in school quality and availability. Rapidly growing metropolitan fringe areas around Durban and Pretoria account for a significant proportion of the homeland population, but remote rural areas remain densely populated. Migration patterns, although hard to predict, suggest that more than half of South Africa's African population will still be living in homelands in the year 2000.

Over three-quarters of all African matriculation students attend homeland schools; yet, Mathematics and Science enrolments in the self-governing and TBVC homelands lag considerably behind those in DET schools in the 'white' areas. It would appear that school quality, and particularly the quality of facilities and instruction in the sciences,

is particularly weak in rural homeland areas, which are often inaccessible and increasingly ignored by policy-makers and officials.

Particular problems attach also to schooling in informal settlements, both inside and outside the homelands. In the absence of urban development plans and infrastructure, physical facilities for schooling are hard to provide. Communities may be diverse and may change rapidly in character. The response of the authorities to demand for schooling in (often illegal) informal settlements has been minimal and *ad hoc*. The DET has in some instances registered schools initiated and financed by the community or outside interests, and absolved itself from further responsibility.

Reincorporation of homelands will have important effects on homeland schooling, improving prospects for financing and administrative renewal. There remain, however, difficult adjustments in the control and management of schools in areas where chiefs and other local élites have had somewhat arbitrary and often repressive influence over schooling. The distorted and fragmented character of rural communities in areas heavily dependent on migrant labour, furthermore, increases the difficulties of developing viable local participation in school governance.

Special education

Approximately 10% of children have special education needs of one kind or another, owing to physical disabilities, learning disorders, early childhood disturbances or retardation, or perhaps because they are rapid learners. While most white schools are able to make some provision for specialized learning needs, there are virtually no black teachers with special education training, and no facilities for special education in typical township and rural schools. There are 235 special schools in South Africa, of which just 68 are for Africans. Less than 0.2% of African children are enrolled in special schools, compared to about 1.5% of Whites.

The consequences of inadequate provision for special education needs are felt throughout the school system. Slow learners hold back classes and handicapped children confront teachers with problems for which they are not equipped. Both quick learners and slow learners suffer the trauma of classroom frustration and alienation from their peers. School discipline and ethos are strained by the ranges of age, ability, and circumstances of children thrown together in unmanageable classes.

While special education is expensive, its absence is also costly. These costs are compounded by the limitations of psychological and guidance services and the absence of non-schooling alternatives for children for whom normal schooling is no longer worthwhile.

Adult basic education

Some six million adult South Africans are illiterate and around two million unemployed youths have inadequate basic schooling to take advantage of training or skilled employment prospects. The consequences of educational disadvantages of adults are felt throughout the economy in low productivity, in the quality of life of low-income households and communities, and in political and social instability.

Current provision of adult basic education (ABE) does no more than scratch the surface of this problem. State funding is inconsequential and private or non-governmental programmes are fragmentary and limited in scope. Indications are, furthermore, that the quality of existing provision is poor, leading to low retention and poor success rates of candidates for examinations. Language competence appears to be a fundamental problem, and is probably the appropriate focus for revitalizing AE.

Technical and vocational education

Technical training of Africans at the secondary and post-secondary levels is limited in scope and generally of poor quality. In 1988 Africans were served by 41 technical colleges, outside the TBVC areas, while there were 71 technical colleges for Whites. Overall African enrolments in these institutions are low, as indicated in table 2.1 above. African enrolments in DET technical colleges and colleges in the self-governing homelands were concentrated in only two subject categories: Commerce, and Industrial Arts and Trades.

Of 5 250 qualifications gained at DET and homeland colleges in 1988, 4 333 (83%) were at Std 10 level or lower. At the same time, in 1988, students in the predominantly white House of Assembly colleges accounted for 25 775 qualifications, 16 305 (63%) of which were at Std 10 level or lower, and 9 470 (37%) at post-secondary level.

The limited impact and poor quality of black technical and vocational education and its often unpopular status amongst parents and pupils have been confirmed by numerous studies. A lack of qualified teachers, resources, and support, poor linkages with commerce and industry, the location of many African colleges in relatively isolated

areas, and problems of funding and control, seem to be common complaints. It has been observed that the poor quality of Mathematics and Science education in DET schools militates against effective technical education.

Technikon education has grown rapidly during the 1980s, although African enrolment remains low. Vocational and technical education have been seriously weakened, however, by the limited demand for high-level skills of a stagnant manufacturing sector. Many students in vocational education do not have employment, and find difficulty in gaining the practical experience appropriate to their study courses.

Higher education

Universities and technikons in South Africa enjoy similar status and funding to institutions of higher education, although their ethos and functions are clearly distinguished. Universities offer study programmes with a strong 'scientific' or theoretical foundation, while technikons are responsible for applied or vocationally oriented courses. Universities have a traditional academic character, while technikons are organized around a principle of 'co-operative education', incorporating periods of work experience into diploma requirements. In practice, these distinctions are blurred. Universities offer programmes that are vocational in content, and the co-operative principle is not rigidly adhered to in humanities programmes of technikons.

Indeed, the distinctions between various universities, and between different technikons, are as great as the differences between the two categories of institution. The ethos, teaching traditions, and research record of the established universities are very different from the characteristics of the newer homeland-based institutions. The correspondence university of UNISA and the township-sited VISTA campuses offer study options similar in certain respects to the programmes offered by the correspondence RSA Technikon or some colleges of education. The large, dynamic metropolitan technikons are quite different, in turn, from their struggling homeland counterparts.

Notwithstanding the growth in secondary enrolments in recent years, relatively few African students find their way into post-secondary education (PSE), and especially into courses in economics, engineering, science, or technology. The percentage of white school-leavers with Std 10 enrolling as first-time entering undergraduate students at the

universities averaged 35% in the period 1987–1989, and Africans only 15%. Indeed, the percentage of Africans with senior certificate passes entering university declined in this period, from 20% to only 13%.

In 1987, 87% of all black university graduates/diplomates were produced by just four institutions — the universities of VISTA, Zululand, the North, and Fort Hare. Results at these universities show an overwhelming bias amongst African university students towards the fields of education, language and literature, and the social sciences, and low outputs in fields such as commerce, engineering, life and physical sciences, mathematical sciences, health sciences, and computer sciences.

Enrolments of women in universities and technikons reflect marked gender biases in subject choice, and the enrolment of women in postgraduate study programmes is particularly low. Women are poorly represented in senior positions in education institutions.

In 1985, Whites accounted for 75% of all university diplomas and degrees. This fell to 64% in 1989, signalling that rising numbers of black students were successfully gaining admission. The proportion of African diplomates and undergraduate degrees rose from 15% to 21% over the same period. Technikon outputs, however, reflected a much stronger racial bias, with Whites gaining 86% of all diplomas in 1988 and 82% in 1989. The proportion of African diplomates rose from an appallingly low 4% to only 6% in the same period. While these figures, especially those referring to the universities, do reflect some positive change in access to PSE, it is evident that this lags well behind the rising demand for places.

During the 1980s, universities have faced increasingly stringent financial constraints, leading to curtailment of enrolment growth of the formerly white institutions. Growth has proceeded rapidly at the newer institutions, in contrast, which would appear to have exacerbated the differences in ethos and academic standards between them. All universities are characterized, however, by wide differences between departments in research and teaching records. Policy formation is made difficult by the absence of rigorous comparative measures of quality and content in university and technikon programmes.

Financing of education

Total spending on education in South Africa

The total costs of education in South Africa in 1990 are estimated in table 2.7 as R22.6 billion, or about 9% of Gross National Product

(GNP). This estimate excludes the indirect costs represented by students' time, and income and output forgone as a result of studying, as well as various forms of non-formal education and training.

State spending accounts for around three-quarters of education spending in South Africa. Government accounts for well over 90% of the running costs of schools, however, and private outlays largely comprise direct spending by households on books, stationery, additional transport, and uniforms. Private schools and colleges are a small part of the education sector, comprising less than 1% of total costs. At the tertiary level, the situation varies among institutions. The older universities were established largely with private funds and now obtain about half of their total funds from the state, while newer universities and colleges are much more heavily dependent on budgetary support.

Current state expenditure amounted to R16.5 billion in 1990, of which the white share was about one-third. Whites comprise about 10% of the age five to nineteen population and about 12.5% of total education enrolment. Capital spending by government, predominantly on school buildings, is estimated here at R1.1 billion, or 6.4% of total government education spending.

By international standards, education spending in South Africa is high, both as a proportion of national income and as a share of the government budget. The depressed state of the economy has meant that education departments, confronted with rising demand for schooling and tertiary education, have been under extreme financial pressure. Government has sought to shift a higher share of the costs of higher education, of training, and of privileged white schooling onto parents or the private sector.

School financing

The fragmented character of the South African school system is reflected in the diversity of financing arrangements for schooling. In 'government schools', the land and buildings belong to the state, and government pays teachers' salaries and purchases supplies and services directly. Parents pay non-compulsory fees which go into a 'school fund' over which the principal and school governing bodies have discretion. In 'private schools', the land and buildings belong to a church or independent trust, a school council or board of trustees hire-teachers, and the principal is responsible for purchasing supplies and maintaining accounts. Costs are recovered through fees and

Table 2.7: Estimated total expenditure on education in 1990

	Total spending R million	%	White share %
Total government spending	17 600		33
CURRENT EXPENDITURE	16 470	100.0	35
Pre-primary education	130	0.8	69
Primary schooling	6 480	39.3	24
Secondary schooling	5 140	31.2	31
Special education	490	3.0	64
Technical and vocational education	680	4.0	65
University education	1 730	10.5	65
Administration, auxiliary and associated services	1 260	7.7	31
CAPITAL EXPENDITURE	1 130		18
Private education spending	5 000	100.0	45
Fees and other household/student outlays:			
Pre-primary	100	2.0	80
Primary	1 500	30.0	25
Secondary	1 600	32.0	42
Tertiary and other education	1 000	20.0	75
Corporate grants, investment income of universities, foreign aid, and other sources	800	16.0	50
TOTAL	22 600		36
Govt education expenditure/total govt spending			23.6%
Govt education expenditure/gross national product			7.1%
Total education expenditure/gross national product			9.0%

charges, supplemented by formula-based grants or transfers from government. In 'community schools', ownership of the land and buildings usually vests in a tribal authority or other local authority, which often has partial responsibility for construction and maintenance, while government supplies teachers and teaching materials. In

'state-aided' schools, government provides teachers and perhaps some teaching supplies, but land and buildings are privately owned (in most cases by farmers or mines).

In terms of the 1967 Education Act, schooling for Whites was supposed to be 'free' in government schools, and in terms of policy reforms of the 1980s, schooling is supposed to be 'separate but equal' in the various racial and regional education departments. In practice, government schools have continued to charge fees, covering the costs of things not supplied departmentally, and the facilities and running costs of schools vary substantially both between and within departments.

Outlays on government schooling are direct charges to the departments responsible (or, in the case of white schooling, the provincial departments) rather than transfers to independently audited schools (except in the case of special schools). Allocations within the (white) provincial departments are reportedly controlled by an enrolment-based formula. During the 1980s, an attempt was made to put school funding in all departments onto the same formula, phased in over ten years, but the plan was abandoned as unaffordable. Details of the formula used by the provinces in determining financial allocations to schools have not been made public, and it has probably been modified as part of the design of new management 'models' for schools in the 1990s. In effect, government is now encouraging formerly white schools to opt for 'state-aided' status, in which teachers' salaries will be paid by the government while other costs become the responsibility of autonomous school-governing bodies.

Although this partial 'privatization' of white schools reduces somewhat the racial inequity of state spending on schooling, tax concessions associated with some forms of private funding of schooling remain significant sources of implicit state subsidization of privileged schooling. Recent reforms do attempt, however, also to encourage private donations for black school upgrading through tax breaks.

The backlog in state support for construction of schools in black residential areas is now partially being addressed through school classroom building by the Independent Development Trust (IDT). Although this channel for government spending arguably bypasses some of the bureaucratic delays in public works programmes, it seems unlikely that the Trust will systematically redress the substantial regional and rural-urban imbalances in existing education infrastructure.

It is apparent that the reintegration of homelands into South Africa and the amalgamation of the various education departments will require substantial reorganization of the governance and financing of schools. As teachers take up something like 80% of the costs of schooling, however, and as teacher remuneration is now very largely standardized across departments, the integration of education departments will not mean automatic increases in the overall costs of the system. The difficult policy issues concern allocation norms and financing procedures, changes in which are required if movement toward parity is to be achieved.

The process of system integration, however, is crucial. The approach of the white DEC in the 1990s has been to reduce costs by retiring teachers through generous redundancy settlements. Expansion and desegregation of formerly white schools, which would be an alternative approach to reducing average per pupil costs, has been conspicuously avoided.

Funding higher education and research

Higher education and scientific research are subsidized by central government, but in recent years universities, technikons, and the statutory research councils have had to find increasing shares of their funds from other sources. Government introduced a cost-based subsidy formula for universities in the early 1980s, based essentially on 'full-time equivalent' student enrolment in broad study categories. The formula proved unsustainable as university enrolment growth in the 1980s greatly outstripped the state's willingness to meet its share of costs. Technikons, growing from a smaller base, have come to take a larger share of higher education funding. Newly established VISTA University and the various homeland institutions, symbolic of the ethnic visions of the late apartheid era, enjoyed privileged access to state funding during the decade and grew rapidly. By the 1990s, however, universities were all in financial difficulties.

Fees, donations, and contractual research funding now contribute nearly half of the income of universities such as Cape Town and Pretoria. The more recently established black universities have weak research traditions and enrol large numbers of students unable to meet rapidly rising fees, so that they remain heavily dependent on state subsidies.

Universities and technikons are autonomous, can raise funds from the private sector or the capital market, and can determine

salaries and wages independently. Government retains the right to approve the introduction of new 'subsidy-attracting' courses, however, and institutions tend to follow public-sector salary trends.

In the absence of more systematic planning of the higher education system and prioritization of study and research resource allocation, government has attempted in the 1980s to persuade universities to co-operate in voluntary 'rationalization' of programmes. Smaller departments have been culled at some universities, and neighbouring institutions have sought ways of collaborating. Apart from the implicit linkage of institutional subsidies to enrolment and broad earmarking of research funding, little use is made of financing arrangements as mechanisms of directing resources in higher education and research in South Africa.

Financing vocational education and training

In the depressed circumstances of the 1980s, demand for VET has been stagnant. Private financing of training has largely gone to informal job-specific skills development and the state has withdrawn or reduced both tax concessions and direct support for training. Technikons and technical colleges have received increasing subsidies, but the range of occupations and skill levels to which they cater benefits a limited proportion of employees.

In terms of the training system envisaged by the NTB, state subsidies for training will complement levies or fees charged to employers and training will be undertaken by independent training boards for the various industrial sectors. In practice, state support for training in the 1980s has largely gone to regional training centres catering to a broad range of trainees, rather than to industry-specific bodies.

The deficiency of both private- and public-sector funding of vocational training in the late 1980s and early 1990s reflects a lack of co-ordination of education and industrial development in South Africa, and signals a failure of both the state and private employers to take a long-run developmental view.

Conclusion and summary

To sum up, almost half a century of apartheid has created an education system which mirrors the extremes of privilege and deprivation characteristic of South African society as a whole. While a minority enjoys levels of education comparable with those of the most

advanced nations, overall the country has failed to build the educated human resource base necessary for economic development and the evolution of a more equal and democratic society.

The poor quality of black education is a contributing factor to South Africa's worsening economic position and the crisis of unemployment. Inadequate mathematics and science teaching in schools constrains the growth of high-level expertise in business, engineering, and the sciences. Poor language and communication skills undermine training, social mobility, and cultural development.

Not only must the upgrading and expansion of the education system be geared to the challenges of economic reconstruction, but it must address as well the requirements of redress and the empowerment of the oppressed majority. Development of high-level skills within the work-force is required, as is mass access to high-quality general education as an essential foundation for further education and training. The fragmented, low-skill, low-quality nature of current education and training provision is an obstacle to development in all its dimensions. In the chapter following, current proposals for redress of key failures of the present education system are briefly discussed.

Notes

1. Available demographic and educational data are not altogether complete and are of varying reliability. The population estimates used here and in subsequent tables were adapted from The Urban Foundation, *Population Trends: Demographic Projection Model*, 1991. Education statistics were taken from: Department of National Education, *Educational Realities in South Africa 1990*, Report NATED 02-300 (91/06), June 1991; Department of Education and Training, *Annual Report 1990*, RP 56/1991; National Manpower Commission, *Annual Report 1985*; RSA Central Statistical Service, *South African Labour Statistics*, 1991; Research Institute for Education Planning, *Education and Manpower Development*, 1990; South African Institute of Race Relations, *Race Relations Survey*, 1989/90 and 1991/92; Development Bank of Southern Africa, *SATBVC Statistical Abstracts*; 1990/91 *Estimates of Expenditure* of the RSA Government and its various houses; unpublished statistics provided by the Research Institute for Education Planning and the Development Bank of Southern Africa; Edusource, *APEX data tables*, 1992; Ann Short, Early Childhood Education, in *McGregor's Education Alternatives*, Juta 1992; A R Donaldson, Reorganizing the Education system – possibilities for the year 2000, *NEPI Report*, 1992; Glen Fisher, The Reform of Secondary Schooling in South Africa: general education, quality, flexibility, *NEPI Report*, 1992.

3 EMERGING ALTERNATIVES

The education reconstruction challenge

South Africa in the 1990s inherits education and training systems with distinct strengths and weaknesses. In the previous chapter, several features of present systems of education provision were identified:

- ☐ Education governance is fragmented and dominated by the state bureaucracy.
- ☐ Governmental provision and subsidization of schooling varies greatly by race and region.
- ☐ The quality of basic schooling for the majority of children is deficient; pre-school education opportunities are lacking; special education provision is largely absent.
- ☐ VET is poorly developed and lacks adequate articulation both with schooling and the occupational requirements of industry.
- ☐ ABE opportunities are inadequate.
- ☐ Racial and gender imbalances characterize higher education and training.
- ☐ Financial constraints inhibit the state's capacity to meet growing demands for schooling, higher education, and subsidization of VET; rising fees make higher education unaffordable for increasing numbers of school-leavers.

These add up to a substantial education reconstruction challenge. There are strengths in the existing education structure on which to build, however. Two advantages over other post-colonial settings should be stressed. The first is that, although there is regional variation in access to schooling, South Africa enrolls, on aggregate, over 90% of the school-age population. South Africa does not face, as Zimbabwe did at independence, a massive quantitative school expansion; there is scope for shifting resources into qualitative improvements in general schooling. A second considerable strength is the depth and quality of higher education in South Africa: a legacy of discrimination leaves the system uneven and under pressure, but there is substantial infrastructure and expertise in place.

Contributions to the debates around education and training

development have come from various quarters in recent years. Government has released two reports as part of its 'Education Renewal Strategy' (ERS), and has also announced several shifts in education financing and management policies and in the co-ordination of VET. Private-sector initiatives, although not systematically enclosed in any single policy document, add up to considerable support for the upgrading of basic education, and improvement in the scale and quality of VET provision. International pressure — notably reports on primary education and on the tertiary sector by USAID, and a report on human resources by a Commonwealth Expert Group — focuses strongly on redress of apartheid inequalities and affirmative action in higher education. Policy documents of the African National Congress (ANC) and other parties place the reconstruction of the education system high on political agenda. The NECC lays particular stress on curricular change and the democratization of education. The Congress of South African Trade Unions (COSATU) has become a leading advocate of a systematic approach to upgrading and diversifying the skills both of workers and work-seekers. There are also organized lobbies representative of education development networks: for example, for pre-school educare, AE, primary health education, and in-service teacher training. Teacher organizations have become forceful advocates of improvements in schooling and teaching conditions. Established interests, such as universities, technikons, and professional training bodies, also contribute to policy discussion on particular issues.

Some common goals can be distilled from this heterogeneous set of pressures which bear on the process of education system change.

- ☐ There is agreement that a unified national education department and a common education policy are required, and that equalization of educational opportunities should be a central goal in a unified system.
- ☐ It is widely acknowledged that the quality of basic schooling needs to be addressed, and there is broad agreement on several aspects of this challenge, including the need for pre-school learning opportunities, the importance of language and curriculum issues, and the key role of teacher training and in-service teacher support.
- ☐ The need to broaden the range and relevance of VET provision is widely agreed.
- ☐ The need to improve access and prospects of success in

higher education of students from disadvantaged backgrounds is commonly recognized.

- ☐ The urgency of adult education and training opportunities, aimed particularly at unemployed young people, is widely stated.

Agreement on such broad principles hides, however, marked differences in emphasis or priority in education reform proposals. Seven aspects of education system change in which significant disagreements or competing interpretations exist amongst key policy players are identified below.

Critical policy issues

Competing meanings of 'equity'

The goal of 'equity' and the meaning of 'equality of education' are understood in various ways with correspondingly different implications for education policy.

The issues at stake in the definition and interpretation of 'equality' are as profound and difficult in education as in other dimensions of human welfare. Equality of opportunities or resources can be distinguished from equality of outcomes. Equality of content can be distinguished from equality of options. In addition to the problem of conceptualizing equality of education, there are important links between education and non-education opportunities which need to be considered in the assessment of policy options. Equal access to library facilities or laboratory equipment, for example, mean different things to children from various home environments, and different things to children with varying future work prospects.

This implies, in one view, that equality of education requires compensating additional provision of equipment or resources for children from disadvantaged backgrounds: that schools must spend more on the poor than on the rich. It is argued that schooling should correct the gender imbalances, for example, in curricular choice arising from perceptions of labour-market demands. This view is implicit in proposals for 'indices of need' as determinants of state spending on schooling, or for affirmative action for women in skills development. Although the goal of complete equality of educational attainment is clearly not realizable, there is a wide range of possible interventions aimed at compensating individuals for non-educational and prior educational disadvantages. Several recent education policy reports advocate substantial interventions of this kind.

An opposing view, however, emphasizes the complementarity between educational and non-educational circumstances of learners. Differences in the circumstances from which children come, and in the job markets to which they will have access, affect their preferences and their abilities to exploit education opportunities. It has been argued, for example, that it is wasteful to emphasize 'academic' school subjects or university humanities courses when the job market requires technical or commercial disciplines. There are clearly also limits to the utility of additional school resources if children's home resources are severely disadvantaged. Although few would defend inequality in basic education entitlements on these grounds, there are persuasive arguments for 'choice' and curricular differentiation in secondary and higher education. Recognition of differences in 'demands' for education amongst differing groups or individuals is implicit in parts of the state's 1992 curriculum proposals. The view that differences in background should be compensated for is implicit in the rejection of these proposals by several parties.

It is tempting to represent these alternatives as matters of principle or differences of education philosophy and leave it at that. In practice, however, resource constraints force policy-makers not only to choose between principles, but to compromise between competing dimensions of the public good. Economists are wont to stress the tensions between equity and efficiency in public policy — the discussion above points to such a tension. But there is a further dimension to this tension. 'Equity' can be sought, by the state, on behalf of several alternative constituencies. Promoting equity through improved basic education, accessible to all, is different from promoting equity through affirmative action on behalf of rising élites. And in South Africa in the 1990s, the first is largely consistent with allocative efficiency (as basic education has been so unequal in the past), while the second runs the risk of conflicting with efficiency requirements (for much the same reason). Recognizing the competing constituencies which policy-makers must serve points to the critical importance of the policy-making process, discussed further below.

Centralized and decentralized control

There is disagreement over the appropriate functions of central, regional, and local authorities in the governance of education.

There is support in the state's ERS for decentralization of education governance. The three motivations commonly put forward for

policies of decentralization — to improve administrative efficiency, increase system effectiveness, and increase local participation — are clearly in evidence in the state's proposals. Critics argue, however, that a strategy of decentralization may impede rather than facilitate necessary reforms. Decentralization of the control of education reaches beyond the issues of administrative convenience and practicality and of local participation. If decentralization is perceived to further the interests of privileged groups, pre-emptive attempts by government to move in this direction will generate further conflict and ultimately fail. In this regard the absence of clear commitments regarding the pace and terms of deracialization of the formerly white school system, and ambiguity regarding financing of privileged schools, are serious deficiencies in current state policy and the ERS proposals.

Advocates of a unified education system, including the NECC and the ANC, tend to favour centralization of major education policy issues, including the critical control of the distribution of education spending. Stress is also given to the promotion of a common nationhood within a unitary state, and to equalization of opportunity through mass access to good-quality schooling and a common, general curriculum. Local control of schooling is viewed with suspicion as it is associated with differential opportunities and discrimination.

Access and the curriculum

There are diverging views on details of the school curriculum and on differentiation of education opportunities.

Extending the emphasis given to 'career-oriented' education in the 1981 *Investigation into Education* reports, the recent proposals of the Committee of Heads of Education Departments (CHED) envisage that the last two years of the primary school (Std 4 and 5) should provide a vocational orientation, particularly for those students identified by means of tests and general assessments as potential school-leavers. The state's ERS has generally been interpreted to envisage just seven years of compulsory basic schooling, followed by career-oriented alternatives for some proportion of children. The NTB, the Department of Manpower, the South African Chamber of Business (SACOB), and a wide range of private-sector interests, have on many occasions argued that education in South Africa is excessively 'academic' and that greater emphasis should be given in the curriculum to

preparation for the world of work. In this view, career guidance, testing, and curricular differentiation are vital features of the post-basic school system.

An alternative view holds that differentiation of this kind, linked to a formal Std 5 exit point, must be expected to reinforce the current tendency for disadvantaged pupils to exit the formal school system with only a primary education. Differentiated curricula would lead in turn to different post-school education possibilities, pushing more students in a vocational direction and limiting the numbers following a university-oriented general curriculum. Rather than reinforce such 'tracking' and occupational preparation in the school phase, it is argued that good general schooling should be extended at least until Std 7, with vocational training delayed until entry to the labour market.

Vocational education and training

There is disagreement about the appropriate structure and organization of VET.

If vocational preparation is not the responsibility of schools, it must be undertaken in training institutions, appropriately financed and managed. COSATU has developed detailed proposals for VET programmes, linked to ABE, to which workers and unemployed persons would be entitled, to be financed both by the state and employers. COSATU envisages active involvement of unions in industry-managed training systems and stresses the importance of comprehensive training programmes linked to promotion opportunities right up the occupational ladder.

Alternative VET models have not been presented in such detail, but employers tend to favour more adaptable approaches to training, linked to demand for specific skills, while retaining traditional divisions between flexible intensive specific training of operatives, apprentice-style training in craft skills, and college- or university-based preparation for professional or technological occupations. There are also competing views regarding the respective responsibilities of the state, employers, and employees for meeting the costs of training.

Several commentators have argued that the existing technical colleges could usefully be strengthened and expanded, taking on a wider range of general and specific education and training functions. Some envisage greater collaboration between colleges and employers; others see these evolving into community colleges with strong links in local communities and with local government.

Organization of higher education

There are various views on the restructuring of higher education.

Several reports in recent times have drawn attention to the weaknesses of the historically black universities and have argued for a redistribution of resources towards these institutions, coupled with a strong emphasis on affirmative action in admissions, academic support, and personnel appointments at historically white universities and colleges. Both racial and gender inequalities in higher education have been highlighted. The reductions in state subsidization of universities in real terms since the mid-1980s has been viewed as an attempt to inhibit expansion of black enrolment at traditionally white institutions, but there have also been calls for transfers of resources from these to the historically black campuses.

An alternative view stresses the importance of maintaining academic excellence in the research-oriented, established institutions. Implicit in this is the view that South Africa cannot afford its university system as presently constituted, and a separation between research-oriented institutions and predominantly teaching-oriented colleges or undergraduate universities should be brought about. There is a variety of related issues of access, standards, financing, institutional specialization, and articulation between colleges and universities on which various options have been described.

Education finance and management

There are competing views on the appropriate roles of government and private sources in financing and management of education and training.

The state has embarked on a partial 'privatization' of schools administered under the white DEC, giving to parents greater responsibilities both for funding and management of these schools. Government has also withdrawn subsidies and tax concessions for training, reducing its support for, and control of, these activities. There is support for this policy drift, largely on the grounds that greater exercise of choice and private management foster efficiency and flexibility in meeting education and training demands. Current reforms of white schooling have been condemned by the NECC and the ANC as a cynical attempt to forestall desegregation, however, and 'privatization' has widely been viewed as a strategy for stalling redistribution. COSATU advocates a greater role for both the state and organized labour in the regulation of training. There are many aspects of the

regulation and control of the schools, colleges, universities, and training activities in which disagreement exists. Prescription of curricula, certification and examinations procedures, and planning and recognition of education institutions are just some of the key regulatory functions of government currently subject to review.

Policy-making

There are, finally, alternative perspectives on the organization of the policy-making process in education and training.

Policy-making has been a comparatively closed bureaucratic affair under National Party rule. The ERS, although open to public contributions, has largely been developed within the education establishment. Democratization of the policy-making process has, however, been a central demand of the ANC, COSATU, the NECC, and other education interest groups. What this means in practice is open to several interpretations.

One view is that democracy requires access to decision-making by all stake-holders or constituents, in this instance within the education sector. Delimiting the participatory rights of particular constituents is, however, fraught with difficulties: in practice, this notion of democracy frequently presumes a prior allocation of access to political influence. A second view stresses the electoral and legislative institutions of representative democracies as the primary locus of democratic accountability. A third view focuses on the procedures through which political and bureaucratic powers are mediated and tamed in decision-making processes and administrative practice. These perspectives are partial and complementary, and point to the importance, if policy analysis is to be taken seriously, of a detailed account of the planning processes, management systems, and organizational structures through which the state supports education and training.

Choices among options for the management and financing of schooling, the structure of the school curriculum, the organization of training, and other points of disagreement on the overall structure of education and training are made through political and administrative decision-making processes. Policy analysis is not a substitute for political decision-making, but can provide an evaluative framework within which options can be considered and choices made. The chapter which follows discusses the key issues in improving basic education provision and extending post-basic education and training

opportunities against the background of three evaluative criteria: the goals of greater equity, improved efficiency, and democratic process in the provision of education and training in South Africa.

4 OPTIONS FOR EDUCATION SYSTEM CHANGE

Policy objectives and the role of the state

Equity, efficiency, and democracy are the objectives underpinning the following discussion of options for education system change. These objectives have aspects both internal and external to the organization of education. Equity is taken to mean both that education opportunities should be fairly distributed and that the distribution of education entitlements should contribute to the reduction of poverty and the redistribution of income and welfare. The redress of racial and gender inequalities is implied by both of these aspects. Internal efficiency means that education resources should be used optimally; external efficiency implies that a pattern of education and training activities consistent with meeting human development needs should be sought. Democracy extends the liberal notion of individual freedoms and responsibilities to the social-democratic principle that the state and civil organizations be empowered by collective decision-making and involvement of citizens: internally, this means public accountability of education and training institutions; externally, education equips citizens for democratic participation.

These purposes can conflict, and they are open to competing interpretations, so there are difficult choices to be made in reorganizing education and training. The alternative approaches to the restructuring of education outlined in the previous chapter reflect alternative views on these purposes and competing conceptions of the appropriate role of the state in the organization of education. Alternative views on the role of the state in education and training can be distinguished in respect of three key dimensions.

- ☐ There are, firstly, several options for the financing of education and training. At one extreme is the view that all education and training should be publicly provided at taxpayers' expense; at the other extreme is the view that education and training should be paid for by the households and employers who benefit from the services.
- ☐ There are, secondly, alternative models for the

organization, or ownership and management, of education institutions. Schools and colleges can belong to the state and be managed as public institutions, with teachers employed as civil servants. Education and training institutions can, alternatively, be privately owned, with staff employed by firms, churches, trusts, or other private entities.

- ☐ There is, thirdly, a range of alternative approaches to the regulation and control of education and training activities. The curriculum can be prescribed in detail, teaching methods tightly regulated, and certification centrally managed, or education policy can be flexible and permissive, leaving the content of education programmes to teachers, parents, or other private interests. Tensions between choice and control in education differentiation and the articulation between education and training programmes and institutions are key regulatory issues.

These alternatives are not neatly packaged options, for there are many possible combinations of private and public financing arrangements, and many alternative approaches to management and regulation. Different models are appropriate for different kinds of education and training, and the role of the state can change with economic development. In each of these areas there are, in addition to the question of what government should do, questions to be answered about the appropriate level of responsible government. Central government can undertake certain co-ordinating functions, while leaving to regional or local authorities, or decentralized offices of the central department, responsibility for other functions.

Education is financed, managed, and regulated in different ways in different countries, so there are many approaches to system change that might be pursued. An education development strategy needs to build, however, on existing institutions and resources. This sets limits to the range of feasible reform options in the South African context. The discussion which follows aims to delimit the range of options providing satisfactory outcomes in all three of our objectives — equity, efficiency, and democracy. Policy analysis contributes both to identifying options which serve these objectives and to clarifying the trade-offs or dilemmas we may face in adjudicating the conflicting demands on the state.

For example, a commitment to upgrading basic schooling sets limits to the resources available for post-basic education; vocational education in schools, conducted properly, means less VET in the work-place; and school-level autonomy over curricular content restricts the role of central government in shaping schooling. These connections set limits to the universe of feasible education reform strategies, but they also highlight the powerful dynamic for social change and human development which inheres in a well-balanced and coherent approach to education system change.

We proceed by exploring options in the provision of basic education, and in the organization of post-basic education and training.

Improving basic education

'Basic' education here refers to general formative schooling, prior to specialization in academic or vocational directions. Basic education comprises primary schooling of six or seven years and from two to four years of junior secondary schooling.

Improving the quality of basic education available to both children and adults is a goal central to all three of the objectives of public policy with which this chapter began. Progress towards a more equal society requires that good-quality basic education opportunities should be available to all; productivity, efficiency, and economic growth must rest on sound education foundations; and democracy is promoted when citizens are literate, knowledgeable, and critical. The debate is not about the need to improve basic education opportunities, but about how to organize basic schooling and AE equitably, efficiently, and democratically.

Education entitlements in South Africa are more unequal in respect of basic primary schooling than any other level, and this underpins inequalities of achievement elsewhere in the education system. Revitalization of basic schooling is the central core of education development. Along with the upgrading of depressed schooling conditions, basic learning opportunities for adults need to be developed. A generation or two of adolescents have either had their access to schooling cut short, or have been through school experiences so deficient and so disrupted that many have acquired not even the rudimentary competencies of a basic general education. To neglect the further education of these men and women would be to entrench for another 40 years the results of the education crisis of the 1970s and 1980s. There is, furthermore, a close link, in the long run, between AE

and the nurturing of the young — for today's youth are tomorrow's parents. How might the provision of basic schooling and ABE be improved?

A community-based approach

One approach to this challenge, consistent with faith in the well-spring of enterprise bottled up in repressed individuals and communities, would be to release schooling from state jurisdiction and leave it to communities to find and exploit local resources for the upliftment of indigenous schools and AE initiatives. A minimalist state might prescribe some core curriculum and set guidelines for the organization of schooling, and might put in place some form of cross-subsidization of schooling in low-income neighbourhoods from federal funds, but would largely leave it to local communities to manage education renewal.

The advantage of this strategy is that it does not rely on education bureaucrats to deliver school improvements, and South African experience certainly provides grounds for scepticism regarding the capacity of the bureaucracy, whether of the old apartheid kind or its recent Africanized homeland variants.

In a context where the state has for long been the dominant supplier of schooling, however, and where communities are fragmented and differ greatly in average income and resources, local voluntary initiatives will be insufficient to meet the challenge of improving basic education provision. The decentralized model fails because redistributive school upgrading is a self-defeating strategy for local communities. When people are mobile, able to move from one community to another, and when the quality of local schooling is a function of local initiatives, then communities which improve their schools will experience inflows of people seeking schooling. The resulting congestion and financial burden undermine the initial upgrading strategy. So basic education will be underprovided if left to local initiative.

State approaches to upgrading basic education

What options are open to the interventionist state, determined to break the stagnation of basic schooling and AE? A catalogue of projects is contained in Table 4.1. There are clearly many possible combinations of these items and there are various ways of promoting each.

Table 4.1: Upgrading basic education — a list of projects

Improving the quality of schooling:

- ☐ Curriculum change
- ☐ Improved school administration
- ☐ In-service teacher training and support
- ☐ Changed teaching methods
- ☐ Building and maintenance of classrooms
- ☐ Provision and repair of furniture
- ☐ Provision of books and teaching materials
- ☐ Use of technological aids
- ☐ Lengthening the school day and school year
- ☐ Smaller and fewer classes per teacher
- ☐ More effective streaming and curricular choice
- ☐ Extension of laboratories and facilities
- ☐ Provision for special education
- ☐ Departmental inspection and advisory services
- ☐ Departmental administrative support
- ☐ Improved school discipline and ethos

Auxiliary programmes:

- ☐ Pre-school educare facilities
- ☐ School feeding and pre-school nutritional support
- ☐ School health services
- ☐ Community library and museum services
- ☐ Teacher centres
- ☐ Teacher exchanges
- ☐ Improved teacher education
- ☐ School-college-university linkages
- ☐ Curriculum research and development
- ☐ Inter-school contact and resource sharing

Adult education initiatives:

- ☐ Night and weekend classes
- ☐ Correspondence and radio programmes
- ☐ Newspaper and magazine features
- ☐ Curricular adaptation: e.g., modular options
- ☐ Employer-provided basic education
- ☐ Education and training for the unemployed
- ☐ Language competence courses
- ☐ Special interest courses: e.g., health, occupational safety, gender issues, art and design

One possibility would be for the state to undertake all these improvements as regular items on annual budgets. This stretches expectations of the bureaucracy somewhat beyond credible limits, and so there is a case to be made for what might be called the 'second budget'. In this view, the challenge of education renewal requires a dynamic, flexible, innovative, 'developmental' approach, backed up by public funds but operating outside the conventional bounds of bureaucratic procedure. Such an approach would provide scope for exploration of cost-effective strategies for school upgrading, and would be able to draw on non-governmental initiatives and international support.

International research and South African studies provide considerable assistance in assessing the merits of alternative approaches to improving school quality and ABE. Although analysts differ somewhat in the emphasis given to particular aspects, there is probably agreement on the following dimensions of South African education renewal.

- ☐ Early childhood education opportunities need to be extended and improved.
- ☐ Improved quality and availability of books and teaching materials, suitably adapted for a new South African curriculum, both for children and adults, are urgent priorities.
- ☐ Accelerated programmes of school classroom building and furnishing are required, particularly in rapidly growing informal urban settlements and neglected rural areas.
- ☐ A longer and better organized school day is needed, including a midday lunch break.
- ☐ The content and organization of teacher education, including in-service training, need to be revised.
- ☐ Greater use of distance education, including radio and television, should be made.
- ☐ Community libraries, linked to school library services and other community services, need to be developed and strengthened.
- ☐ Systematic improvements in the management and administration of schools and AE initiatives are needed.

Details of school language policy, streaming of classes, the role of special education, the composition and powers of school governing bodies, teacher remuneration and employment conditions, and the

role of examinations and certification are amongst other important determinants of school quality, and are areas of ongoing debate.

Qualitative progress in these areas will require increased spending on congested township and rural schools, along with appropriate institutional changes. In AE too, more spending is needed along with an effective delivery system.

School enrolment growth

In 1990, primary enrolment constituted about 110% of the primary-school-age population, while secondary enrolment was about 70% of the corresponding age group. Enrolment growth in black schooling has been rapid during the 1970s and 1980s, so that there is now close to universal enrolment for at least nine years of schooling, and over half of all children reach Std 8, or the beginning of the senior secondary phase. As indicated in chapter 2, repeating, absenteeism, and the poor quality of primary schooling result in markedly lower average school attainment of school-leavers than that consistent with overall enrolment rates. This means that improvements in the quality of basic schooling will lead to a slowing in the growth of overall school enrolment.

If qualitative improvements in African schooling were to bring primary enrolment in the year 2000 down to 102% of the primary-school-age population, for example, and secondary enrolment were to rise to 85% of the age thirteen to seventeen population, enrolment growth during the 1990s would be 1.6% in the primary phase and 4.5% at the secondary level — both well below enrolment growth rates during the 1970s and 1980s. This projection is consistent with universal schooling of nine years and enrolment of three-quarters of the age fifteen to seventeen population in senior secondary schooling.

Without systematic upgrading of township and rural primary schooling, however, primary enrolment will continue to exceed the corresponding population by about 10% and secondary schooling will continue to be undermined by large numbers of over-age pupils.

Qualitative renewal of primary schooling is the key to reducing overall enrolment growth to the rate of school-age population growth of about 2.5% per year.

The alternative to this strategy is to enforce strict rationing of access to secondary schooling in the interests of curbing financial demands on the fiscus. The view is sometimes advanced that South Africa can, at present, only afford universal schooling up to the end of

primary schooling, or six or seven years of basic education. As indicated in chapter 2, however, in the country as a whole, average length of school enrolment is already about eleven years. Universal schooling of nine or ten years is close to being realized. There are, furthermore, neither training nor employment prospects for larger numbers of school-leavers, and the provision of schooling may well absorb the young unemployed at lower social cost than either street gangs or work relief projects. Rationing access to schooling may prove to be inefficient and inequitable, and will also offend public opinion.

However, growth in AE opportunities will, in time, relieve pressure on the school system by providing alternative routes to completing basic and secondary education for those who leave formal schooling to seek work, or for other reasons. Cost-efficient approaches to supporting the expansion of AE opportunities need to be sought: further discussion of this follows below.

Towards equity in financing basic schooling

State expenditure on primary schooling in 1990 ranged from about R3 000 per child in white suburban schools to R600 per child in some homelands, and primary schooling took up 40% of the total education budget. Secondary schooling accounted for 30% of the budget, government spending ranging from over R4 000 per white pupil to an average of R1 300 per African child. Fees and other private contributions added perhaps R1 000 per child in typical suburban schools, and R200 per child in township or rural schools.

If school enrolment growth is not to be drastically reduced, there are two ways in which per pupil spending on township and rural schooling could be increased. Increased total spending on schooling might be possible, firstly, and redistribution from white to black could be undertaken, secondly. Evolutionary and more ambitious approaches to redistribution could also be distinguished.

The first option is of limited relevance. At over 20% of government spending and 7% of national income, education absorbs a share of public resources which is already high by international standards. Reductions in national defence expenditure, in the short run, and an increase in the rate of economic growth, in the long run, will generate state revenue which might contribute to financing education. As indicated in chapter 1, however, the post-apartheid state will face substantial demands for reconstruction spending in many areas, and economic stagnation during the 1980s has weakened the state's fiscal

base. Substantial increases in 'current' spending on schooling are unlikely.

Investment in improved education infrastructure, curriculum development, and teacher training are, however, strong candidates for both international aid and temporary increases in domestic state spending. Progress in education will depend crucially on using the investment opportunities of the 1990s wisely. Much of the discussion that follows concerns improvements in the efficiency of the education system which might be achieved through judicious system change in the immediate post-apartheid period. The experience of many decolonizing countries indicates that education investments can impose increased running costs on the future which become unsustainable: the goal has to be to seek system changes that reduce, rather than increase, the recurrent costs of delivering good-quality education in schools and to adults. It is worth stressing that qualitative improvements, increasing the 'return' on education investments, will strengthen future claims of education on the fiscus: failure to effect qualitative improvements will make education spending wasteful relative to alternative claims on the state.

The costs of delivering education in the present white school system are unaffordable for the population as a whole. The principal reasons for the cost differences between suburban and township or rural schooling are the following. The land and buildings of typical suburban schools have higher maintenance costs than the facilities of township and rural schools. There are about half as many pupils per teacher and classroom in white schools as in DET and homeland schools. Average teacher qualifications and experience are higher in suburban schools than in township and rural schools. Suburban schools spend perhaps five times as much as township and rural schools on books, materials, and services. Given these circumstances, what contribution might redistribution, from white to black make towards releasing resources for improving the quality of township and rural schooling?

One option would be to cut state spending on suburban schools, as is currently the stated intention of government. In wealthier neighbourhoods, this leads to higher school fees and other charges as schools substitute private for public sources of income. In poorer white neighbourhoods, schools will be forced to reduce teaching staff and cut back on curricular programmes and the purchase of supplies and services. The redistributive impact of this reform is clearly limited: a R1 000 reduction in state spending per white school pupil

releases about R100 for spending per black schoolchild. It is also a consequence of this approach that the privileged suburban school system will remain predominantly white.

An alternative approach might be to expand and desegregate suburban schools, raising average class sizes and lowering per pupil maintenance and administration costs through bringing larger numbers of pupils into the privileged school system.

Subsidized school transport would facilitate expansion of suburban schools. This approach would contribute to redistribution through the movement of children from black to white schools. Doubling the enrolment of formerly white schools would reduce enrolment in the township and rural school system by about 10%, but with some increase in the overall cost of the suburban system. It is an obvious advantage of this approach that privileged schooling would cease to be the preserve of Whites.

These reforms might, thirdly, be combined, requiring suburban schools both to expand their enrolment and to shift an increased share of their costs onto parents. A report prepared for the research group suggests that, with an increase in the education budget of 3.7% per year in real terms over ten years, close to a doubling of per pupil state spending on township and rural schools might be achieved through doubling enrolment and halving the state subsidy per pupil in suburban schools. This would come close to bringing about equal per pupil state spending and would allow pupil-teacher ratios to be reduced from 42:1 to 30:1 in primary and 32:1 to 25:1 in secondary township and rural schools.

These are evolutionary approaches to financial redistribution which would reduce state subsidization of privileged schooling and increase resources available to township and rural schools, but without altogether eliminating the characteristic differences between schools located in high-income and low-income areas. A more ambitious redistributive goal than equalizing state spending would be to bring about equal per capita total spending on schooling. If schools in wealthy neighbourhoods can draw on greater private contributions than schools in poor neighbourhoods, this requires state subsidization of schooling to be inversely related to average household income. The state might subsidize schooling only in low-income areas, for example, or might link its per pupil subsidy to an index of relative need, such as local per capita income. An alternative strategy for achieving education equality would be to equalize state spending on schooling and prohibit fees or private contributions. Reforms of this

kind would be strongly redistributive, but would sharply reduce the resources available to suburban schools, leading to declines in quality and deterioration of facilities.

There is a fundamental policy dilemma here. Although the goal of equalizing education opportunities would be served by enforcing equalization of school resources per capita, the consequential qualitative decay of the existing suburban and private school system would have undesirable political and economic effects. Disaffected households experiencing sharp reductions in the quality of education opportunities at their disposal would seek alternatives, for example through emigration, while rising élites would put pressure on the state to restore higher spending on suburban schools. There is also an important contribution made by good-quality schools to the nurture of skilled and creative leaders and managers which a tottering semi-industrialized economy cannot afford to sacrifice. For these reasons, progress towards equity in education entitlements needs to be balanced against preservation of existing good-quality schooling. There is scope, however, for shifting the costs of privileged schooling onto those who enjoy such advantages.

Ownership and management of schools

There are important links between financial reform and the ownership and management of schools. Governments take responsibility for establishing schools because the general quality of basic education is a public good and access to schooling should be assured for all. If government owns and manages schools, however, it is responsible for their administration and for financial control, requiring substantial bureaucratic management.

If government devotes insufficient resources to administration, monitoring, support services, and school development, schools stagnate in quality and effectiveness. International assistance and non-governmental programmes can play a role in school development. The evolution of school systems in developed and developing countries has almost always involved substantial administrative and logistical co-ordination by government, however. The stagnant state of township and rural schooling, and the urgency of administrative upgrading, argue for the transfer of the state's administrative resources from managing suburban schools to upgrading township and rural schools.

If suburban schools become semi-autonomous, owned and

managed by school trusts or other governing bodies, administration and financial control devolve to the local governing body, releasing departmental administrative resources for other purposes. Maximum decentralization of school administration is achieved when autonomous schools are financed through an enrolment-based subsidy formula, subject to appropriate regulations and audit requirements. By requiring suburban schools to opt for this 'state-aided' status, government can redeploy its administrative resources for the management of remaining departmental township and rural schools, which may in itself be an important redistributive reform. Government is also relieved of the building and maintenance costs of suburban schools. It is a consequence of this move, however, that direct departmental management of suburban schools is replaced by indirect regulatory control.

The responsibilities which school trusts or governing bodies take on in this 'model C' option are extensive and onerous. The state is relieved of financial and administrative responsibility for estates and buildings, school vehicles and equipment, supplies and services, and the employment of non-teaching personnel. In addition, parents or trustees take on legal and financial responsibilities associated with risks, liabilities, and the ongoing solvency of the school enterprise. A critical issue in this regard is the ability of the school to collect fees from parents unable or unwilling to pay. If suburban schools are to be accessible to low-income households, some form of bursary or grant scheme will have to accompany reductions in general state subsidies.

Both local government and civic organizations could contribute to accelerating the desegregation of formerly white schools and administrative renewal of township schools. Municipal rates rebates on school property and service charges, perhaps linked to enrolment levels, are instruments through which local government could implicitly subsidize schools and encourage better use of existing facilities. Civic organizations and local commerce could support bursary schemes, pre-school projects, and bridging and school enrichment programmes.

Several further management and regulatory issues arise. Reduced dependence on state subsidies must be associated with the right of school governing bodies to use school facilities to supplement fee revenue, for example through hiring out of facilities or operating sports clubs. Schools requiring new buildings or substantial renovations may need to borrow, in which case suitable security must be available. Successful schools will try to hold onto good teachers by supple-

menting their remuneration, but costs may be driven up by competitive bidding and inequalities amongst institutions accordingly reinforced. Finally, there are substantial difficulties in overcoming the 'free-rider' problem which schools must face in establishing effective democratic governing bodies: for the majority of parents, it is not worth the time and effort to participate actively in school governance.

It seems unlikely that a completely decentralized suburban school system, in which individual school governing bodies find their own various solutions to these problems, will be efficient. It also seems both inefficient and inequitable that suburban schools should be entirely independent of government schools in neighbouring townships and rural areas: this would be to preserve the fragmented character of apartheid schooling. Are there alternative models which might involve some form of collaboration or joint management amongst schools, without reverting to full departmental ownership and management?

There are several options. One is the loose affiliation of schools for information-sharing and lobbying purposes exemplified by the Independent Schools' Council, to which most private schools are currently affiliated. Stronger forms of collaboration between state-aided schools might evolve, involving standardization of management agreements or constitutions, joint purchasing of supplies, agreements on personnel remuneration, and common curricula.

Local or regional collaboration or joint management models can also be described. Democratic accountability is fostered if schools are locally or regionally governed, but this may be at the expense of equity in government financing. Decentralized offices of a central education department are an alternative, but are inevitably bureaucratic and undemocratic. Local or regional school boards or other governing bodies, independent of both local and central government, are a third alternative. Affiliation to such boards could be made compulsory for all schools, and their powers might include such functions as buildings and estate maintenance, financial management, co-ordination of supplies and services, appointment of teachers, and local standardization of curricula. Costs of services could be charged to schools, but the advantages of collaboration nonetheless realized. Such boards might provide an office through which resource sharing and school development could be co-ordinated on a local or regional basis. Local education boards might also facilitate the extension of AE opportunities and articulation between schools, colleges, and local training programmes.

Attention is needed, finally, on the question of links between financing and management arrangements and the internal efficiency of schools.

Incentives that encourage the work efforts of teachers and education managers are important, and schools should be rewarded for curricular innovation, improved teaching methods, and creating effective learning environments. If teachers are appointed and paid by a government department, then the department needs to implement an effective advisory and monitoring system which ensures that remuneration and promotion of teachers are linked to job performance. Nothing is more damaging to long-run qualitative improvement in schooling than the deterioration of this departmental responsibility into a mechanical curricular inspection function. Education system change is, in the long run, driven by the incentives that encourage adoption by teachers and school governing bodies of improved programmes. Involvement of parents and other local interests in the financing and management of schools can contribute both to educational efficiency and promotion of democratic accountability.

Rural and farm schooling

Particular attention will be required regarding the needs of rural schools. Homelands, and especially rural areas within homelands, have been seriously discriminated against in education finance, buildings, and resources. These disadvantages will need to be redressed, and it may be necessary for special arrangements, such as double sessions and peripatetic teachers, to be employed as transitional measures.

Schools on farms should come under the full jurisdiction of state education departments, and innovative strategies will be required to overcome the disadvantages of remote small farm and homeland schools. Boarding hostels, school transport services, or living allowances for children attending distant schools are options which warrant scrutiny.

ABE in rural areas and on farms needs support, and is a critical component in improving agricultural productivity and rural development. Cost-effective approaches to rural AE need to be sought: radio and other distance-learning options, subsidized by the state but available to non-governmental organizations (NGOs), are likely to be the keys to progress.

Pre-school educare

Various options for pre-school education could be considered. An additional preparatory year contributes to reducing congestion and repetition in the first year of formal schooling, and accordingly reduces overall primary enrolment rates in time. In Lebowa, where pre-school classes are common, Sub A enrolment is just 11% higher than Std 1 enrolment, compared with an average of 50% higher in all DET and homeland schools. The efficiency of primary schooling is enhanced by provision at primary schools of classroom space and teachers for a pre-school year.

As in most other countries, the state in South Africa has not played a major role in the provision of pre-school education. It is plausible that freedom from state control has enabled the development of flexible and innovative forms of provision, in tune with local needs, which would be hard to achieve in a national programme. There are nonetheless good arguments for increased state subsidization of pre-school education and training of early childhood educators. Consideration might be given to the role of local government in co-ordinating and subsidizing pre-school initiatives in urban areas, as this is an education function that is within the competence and scope of decentralized government. Support for the costs and staffing of pre-school facilities is an element of education provision which is generally within the means of local communities, and can be mobilized through partnerships brokered by NGOs or upgrading projects.

Non-governmental initiatives

There are limits to what the state can manage satisfactorily, and there are aspects of education development that are better managed by non-governmental agencies. Examples of effective non-departmental education support projects include curriculum development, teacher in-service education, AE, pre-school facilities, school library supply, and extra-curricular tuition programmes.

As such initiatives are often at the forefront of education renewal, there is a strong case for encouraging extension of these networks. Government can actively sanction and support private or non-governmental programmes, and can make use of non-governmental organizations in spearheading education-quality upgrading. Partnerships between private projects and state education departments are possible, taking advantage of the flexibility and enterprise of the former and the financial and institutional resources of the latter.

One approach to developing a greater range of AE opportunities would involve such a partnership between organized labour, employers, and state-subsidized colleges. Unions have increasingly brought the basic education needs of their members to the negotiating table and many employers have come to recognize the links between basic education and improved industrial skills acquisition and training. The existing technical colleges provide a possible institutional base for developing appropriate ABE programmes.

Structure of schooling

The critical aspects of the regulation of basic education provision are now considered. Progress in education requires replacement of the present pattern of incremental wastage right up the school system, with a compulsory basic foundation, universally available, with a clear articulation between the basic and post-basic school phases. Reform of the structure of schooling is a critical aspect of restoring good-quality basic education. The concept of an 'education structure' as discussed in this report includes not only the formal, compulsory school system, but also the areas of pre-school educare, post-compulsory education and training, and non-formal provision for adults and out-of-school youth.

Maintenance of the present structure of seven years of primary and five years of secondary schooling is one option to be considered. This is the thrust of the government's curriculum proposals. While there are some positive features to this model, in particular that the maintenance of the existing structure will ease the administrative and logistical problems of changing to a new system, there is something to be said for a new structure as a signal that a transformed education structure is coming into being. It is also desirable that compulsory schooling should not be limited to the seven-year primary school. While it may be impractical to move immediately to nine or ten years of compulsory schooling, there are good grounds for setting such a goal and reorganizing schooling accordingly.

A report prepared for the research group on an 'appropriate education structure for South Africa' puts the case for replacement of the present structure with a unitary, six-year primary school, and a three-year middle school offering a common, general education to all South African citizens, followed by differentiated education and training options after about the age of fifteen. The nine-year compulsory schooling model is developed in more detail below, but much of the

discussion would apply also to a ten-year compulsory structure, such as has been proposed by the ANC, or a full twelve-year basic schooling model.

At the root of the argument for a six-year primary school is the idea of basic education as an effective, good-quality foundation for further education. As against the current diffuse objectives of primary schooling, basic education should emphasize three core components — literacy, numeracy, and a reasonable command of the future language of instruction. In addition, basic education should foster the skills, knowledge and attitudes, curiosity, self-reliance, and adaptability needed by learners if they are to take charge of their own lives and develop the capacity to learn further.

Progress with the quality of basic schooling will improve retention within the primary phase, lowering repetition rates and 'recovering' the 40% or so of children who do not make it beyond Std 4 at present. Consideration might be given over the short to medium term to a nationally recognized certificate of basic education, both for those proceeding to the middle school as the second phase of compulsory schooling and for those who, until the new system is firmly established, will still tend to drop out of formal education at this level. Once the system of nine years compulsory education has taken root, drop-out at the Std 4 level will be minimal. However there will still be a need for a national adult certificate of basic education equivalent to Std 4 to meet the needs of those denied adequate education opportunities under the present system.

A three-year middle school

In the proposed new schooling structure, the second phase of state-funded compulsory schooling would take place in a three-year middle school, covering Stds 5–7. While the middle school would offer a general education aimed at strengthening the basics of language, mathematics, and science, its importance in the broader reconstruction process in a post-apartheid South Africa would lie in its common curriculum and possibly common language of instruction, with a focus on the development of a new common culture.

With the end of compulsory schooling at the Std 7 level (age fifteen to sixteen) there would be a need for an efficient and acceptable examination leading to a nationally recognized certificate. Such an examination should be designed not simply as a selection screen for the next school phase, but as a general signal of achievements and

competence levels. On the basis of such a certificate parents, teachers, and students should be able to make informed decisions regarding further education, training, and employment. A certificate of adult general education equivalent to that at Std 7 should also be available.

The middle school would mark a new beginning in secondary education, in which the dominance of the matriculation examination and of the interests of the minority who proceed to higher education would be ended. In practical terms it would force the reorganization of existing schools, creating in the process an opportunity to establish a greater degree of non-racialism in both staff and student complements. In so far as the middle school would mark the end of formal schooling for some learners, its curriculum would need to be well rounded, integrated, and coherent, and would have to prepare students for a wide range of education and training options.

Special education

It should be stressed that progress will hinge critically on the development of special education options and institutions for those who, through disability or mental handicap, cannot keep pace with conventional schooling through the full primary phase. Proper psychological support services, and improved training of specialized teachers, are needed.

Children who require specialized education can either be accommodated in special schools, or through specialized support and curricular options within ordinary schools. The appropriate choice depends on several considerations: both options are seriously underprovided for the majority of children at present. Desegregation of the existing white special schools, and the integration of the psychological services and other specialized facilities of the various education Departments, must be the first steps towards equity in this critical area.

Welfare services in South Africa, for example for the disabled, are supported by the state through designated grants channelled through statutory councils. Special schools are not usually owned by government, but receive grants from the state for both capital and recurrent expenditure, in addition to non-governmental sources of finance. One advantage of this approach is that institutions providing specialized education or care do not rely exclusively on state finance and regulation, but maintain links with local and international networks

of support and specialized assistance. It is apparent, however, that access of the poor to specialized services requires greater state subsidization than has been available in the past.

Regulation, flexibility, and system change

Organization of basic schooling and the provision of ABE involve a complex mix of regulation and flexibility, national standardization and sensitivity to local needs. Key regulatory issues include the question of compulsory schooling, the length of the school year, zoning and access to alternative schools, prescription of the school curriculum, the training and certification of teachers, internal monitoring, grading and promotion rules, and the management of an examination and certification system.

The tension here between the needs for standardization and flexibility run right through the regulatory problems in basic education. Both flexibility and standardization contribute, in different ways, to securing and developing good-quality basic schooling. Education system change is largely about the use by the state of its regulatory powers to encourage innovation, on the one hand, and to promote or enforce adoption throughout the system of appropriate improvements, on the other.

These issues cannot be explored in detail here, but several critical regulatory options should be noted.

Primary schooling, and in due course nine or ten years of education, could be made compulsory. The policy option here concerns the terms of compulsion. The usual view is that parents should be compelled to send their children to school, and truancy should be made punishable. An alternative view is that local or regional authorities should be compelled to provide schooling for local residents. This option clearly has more force if it implies specific local responsibilities: for example, local authorities might be required to set aside adequate land, and perhaps buildings, for schooling purposes; or local authorities might be required to provide AE, pre-school opportunities, or school-feeding services, partly financed by central government matching grants.

Compulsory schooling means that access must be assured, which means that local schools must be required to admit local children. 'Zoning' in this sense implies that schools may refuse to admit non-local children, so that schools in white neighbourhoods may use zones to resist desegregation. One option for countering this tendency

would be the redrawing of school zones, perhaps with overlapping boundaries; another would be to use financial constraints or explicit enrolment targets to induce desegregation. Local or regional school authorities are likely to manage access and school planning better than central departments, for example through modifying zonal boundaries, providing temporary accommodation or 'platooning' in situations of under-capacity, or transporting children to schools with spare capacity.

Strong advocates of education choice would do away with zoning and state planning of school provision, assuring access rather through guaranteed enrolment-based subsidies for all schools satisfying minimum registration criteria. This 'voucher' model is attractive in developed countries where school places are in excess supply: the resulting competition amongst schools for custom encourages school quality enhancement and sensitivity to changing curricular demands. In contexts where education capacity is chronically short of demand, however, unregulated enrolment-based subsidies may have perverse consequences, driving up quality backed by private funding in privileged schools, while exacerbating congestion in low-income neighbourhood schools trading enrolment numbers for instructional quality.

The regulation of the curriculum is a problem of considerable complexity. Curricular differentiation evolves with education development: regulation need not inhibit this progress. The tendency to view curricular variety as unaffordable should be resisted: in the middle school, differentiation is a key quality dimension, and considerable variety is possible without raising system-wide school costs.

Training and certification of teachers are clearly powerful instruments of education regulation, used in the past to maintain ideological control of schooling, but available to a progressive state to foster dynamic curricular change and improved teaching methods. Several pitfalls exist here, however. Discrepancies amongst teacher-training standards and levels of competence represented by teaching certificates need to be addressed. The tendency of teacher training to stagnate in over-bureaucratic colleges needs to be reversed. In teacher training, the case for greater choice and flexibility seems strong: creative and innovative teachers cannot be produced in rigid learning environments. In the certification of teachers, however, there is a need for greater standardization, particularly if qualifications are to remain the principal determinant of remuneration.

Internal standards, testing, monitoring, and promotion rules in schools are intimately bound up with school quality and the incentives which encourage the work efforts of learners and teachers. Departmental regulations play some part, but probably count for less than the administrative effectiveness of school principals. If schools are well managed, departmental inspection and review of pupils' progress may serve little further purpose. However, mobility between schools, and movement from schooling into colleges and training programmes, are facilitated by standardization across the education system of the basic competencies represented by school grade passes. Moreover, competition within schools, both for promotion to the next grade and for access to academically differentiated streams, serves to encourage work efforts of learners.

A rigorous well-managed examination conducted at the end of primary schooling or the end of the compulsory school phase might provide a competitive stimulus, and also useful information to education departments regarding school development and comparative effectiveness. A standardized examination can also substitute to some extent for detailed prescription of the primary school curriculum. As discussed above, primary and middle school externally validated examinations could have their counterparts in AE certificates. There are various ways of arranging standardized school examinations: a national examination can be departmentally set; regional or local examinations can be nationally monitored; independent examining bodies can be registered and schools can be permitted to choose amongst alternative examining bodies. Although there seems to be a strong case for standardized certification of completion of basic schooling, it is not desirable that schools should be required to gear their primary curricula entirely to such tests.

While the main purpose of basic education must be to ensure that children as well as adults are afforded the best possible education foundation, and are equipped to take advantage of further learning opportunities, there is also a broader developmental thrust to the primacy of basic schooling. The primary school can provide a site of cultural empowerment in impoverished communities, serving as the focal point of crèches, pre-school classes, feeding schemes, primary health services, after-hours study space, a community library, adult learning projects, and boarding facilities. A sound education foundation available to all serves to promote economic progress, is the basis of redistribution of opportunities and incomes, and underpins the institutions of modern democracy.

Post-basic education and training provision

Basic education is an entitlement that all should enjoy, and its quality is a fundamental public good, so it is generally better co-ordinated by the state than the market. Post-basic education and training activities typically require mixed financing and organizational arrangements. There is an important place for choice and flexibility in post-basic education and training. Industry, organized labour, and other non-governmental interests have roles to play in planning and managing system change. Equity in post-basic education is more about the rules governing access and opportunities and the distribution of costs than about uniformity of quality and content.

Post-basic education, aimed at the provision of specialized expertise or skills, brings privileged status and high income prospects to individuals. This argues for shifting the costs of higher education and training onto students and employers. However, the redress of historical injustices in access to higher education and training argues for keeping higher education affordable to all.

It is also possible, given the dominance of universities and technicians in South African PSE, that redistribution away from higher education in favour of other post-secondary education and training activities will improve the effectiveness and appropriateness of the education structure.

Post-basic education and training provision must be directed towards human development in all its aspects: cultural, intellectual, economic, social, and political. In all of these spheres, there are both 'private' and 'public' aspects of education 'demand': people pursue their own interests and develop abilities relevant to the careers to which they aspire; but they also learn skills and values on which society and the economy collectively depend. Students study literature, engineering, or municipal governance, out of personal interest and for the rewards the job market offers, but the benefits of stimulating teachers, competent engineers, and responsible municipal officials are enjoyed by society at large. Education policy is in part about ensuring an appropriate mix of provision for the various education and training needs of a developing society, and is also about matching the costs of this provision with the corresponding distribution of benefits.

We proceed by considering key issues in the effective 'demand' for post-basic education and training, and then move on to examine options for the organization of education and training activities.

General education, curricular differentiation, and training needs

There is an intuitive appeal, underpinned by political and economic considerations, to the claim that schooling should be made more 'relevant' to the world of work and the requirements of the economy. This claim has been particularly strong in developing countries where, from colonial times, governments have sought to curb education 'over-production', limit the demand for higher education, inhibit the drift from rural areas to towns, and strengthen the contribution of the education system to economic growth. In some cases governments have seen vocationalization of the curriculum as part of a broader political and ideological project: for example, to build socialism and self-reliance.

There is, however, international evidence that school-based vocationalism is neither cost-efficient nor effective. The World Bank, after lending strong support to school-based vocational programmes in the 1960s and 1970s, has shifted its support to more flexible models of VET delivered outside the formal school system. Recent World Bank policy statements have argued bluntly in favour of strengthening the quality of, and access to, general secondary education, rather than pre-vocational courses.

One reason for this trend is that skill requirements change rapidly in the modern world. All countries face the challenge of survival in conditions of global economic competition and rapid technological change. In this complex and fluid environment it is unrealistic to aim for a simple 'match' between education outputs and the requirements of the economy. Schooling that does not provide a solid general basis of literacy and numeracy, and which is overly specialized in emphasis, is risky from both an individual and social point of view.

What society demands of schooling is not the development of specific vocational skills, which are best learnt on the job or in specialized training institutions, but the ability to transfer skills from one context to another and a capacity for lifelong learning, either through further education and training or by learning from experience. In a complex, economically interdependent and rapidly changing world the development of the capacities to cope with change itself is a key function of the education system.

Even within a general secondary school curriculum, however, there is considerable scope for diversity or differentiation. The existing Std 10 school-leaving examination can be written in a wide

variety of subjects at several levels of difficulty. The system provides, in principle, for a differentiated secondary school curriculum. In practice, however, virtually all senior certificate candidates opt for a limited number of packages of subject combinations aimed at 'matriculation', which is the class of senior certificate pass required for university entrance. A small percentage of school-leavers write the National Technical Certificate examinations, usually with a view to formal trade training. The effective demand, in the present system, is overwhelmingly for a general secondary curriculum.

A report commissioned by the research group which examines international evidence on diversified schooling points out that in the absence of adequate resources, including funding, equipment, and skilled teachers, curricular differentiation results in poor school quality and the deepening of inequalities of education opportunity. Differentiation of the curriculum can lead to the dilution of core academic subjects, and thus undermine development of the flexible, innovative capabilities required in the modern world. Differentiation is expensive and requires specialized resources unlikely to be available to poor countries, or less developed regions of developing countries.

This suggests that a general education that takes cognizance of the diversity of work and life possibilities confronting school-leavers and that leaves open the possibility of various kinds of further formal, non-formal, and on-the-job training, is more likely to be both equitable and efficient than an education which is heavily biased towards either relatively scarce formal-sector jobs or towards the uncertainties of non-formal work. Attempts to develop high-skill economic growth strategies are likely to rest upon high levels of general education. A general education, moreover, which is governed by the desire to prepare young people for citizenship rather than by a narrow focus on the training of workers is more likely to contribute to the building of a democratic and participatory society.

Against this view, two broad sets of constraints need to be considered. The first is that the resources needed to provide good secondary schooling up to the Std 10 level for all young people are not available, at least for the foreseeable future. Of particular importance in this regard are the supply of competent and qualified teachers and the rapidity with which organizational improvements in township and rural secondary schools can be effected. The second consideration is the distribution of abilities and interests of entrants to senior secondary schooling. Improvements in the general quality of basic schooling should lead, in time, to improvements in the distribution

of scholastic attainment of secondary school entrants. However, the proportion of school-goers who matriculate each year, currently under 20% of senior certificate candidates or about 8% of school-leavers, is a clear indication that a secondary curriculum based on the academic requirements for university admission is not suitable for everyone.

There remains, accordingly, the need to meet different interests and abilities of secondary school-goers either within a common general curriculum or in separate post-basic streams. This is discussed in the next section.

Beyond formal schooling, there is a wide variety of education and training needs which must be met. As is shown in chapter 2, large proportions of school-leavers lack the basic education foundation needed for entry to higher education, but universities and technikons are far the largest part of the post-basic education system. Alongside the poor quality of basic schooling available to the majority of children, the imbalance between higher education on the one hand, and middle-level, post-basic education and training opportunities for non-matriculant school-leavers or adults on the other, is a fundamental deficiency of South African education provision. Three features of the demand for out-of-school education and training have important implications for the organizational and regulatory issues discussed below.

The pace and unpredictability of technological change in the modern world, firstly, argue for considerable flexibility in the structure and content of vocational education (VE). It is widely agreed that industrial progress will require versatile skilled labour and flexible training and employment strategies. Ongoing learning, teamwork and communication skills, electronics and computer literacy, and technological and managerial skills are likely to characterize growing industries. Flexibility implies both adaptability within VET programmes and mobility of people amongst alternative career and training paths.

Secondly, good-quality general education, both prior to work and training and available to adult learners, will be required alongside occupational skills development. Workers will increasingly need an integrated view of the work-place and the organization of work, requiring good-quality general education to precede employment and training. Communication skills and learning abilities of workers at all levels of enterprises are important.

There are particular categories of training, thirdly, such as the needs of the informal sector, small businesses, and homestead

farming, in which industrial collaboration faces insurmountable 'free rider' problems and state provision is necessary. There may be a case for 'privatization' of some components of VET, but there remain important roles for the state in meeting training needs inadequately served by the market and in overall co-ordination and system regulation.

This last point indicates the importance of institutional diversity in post-basic education and training: some needs are best met by employers and employees themselves, some needs require state provision. It is worth stressing that both employers and workers will look to the state to subsidize their education and training, but the interests of the poor are likely to be unrepresented. The democratic state, if it is to take seriously the goal of equity in education, must put in place planning and review processes which explicitly take up the education and training needs of the unemployed and of un-unionized workers.

In the sections following, the 'supply' of post-basic education and training is explored in its various institutional forms: secondary schooling, after-school colleges, universities and technikons, formal and non-formal training. Particular attention is given to the links between schooling options and alternative approaches to further VET. Certification, institutional articulation, and access and selection are separately considered. Ownership and financing issues are discussed in a concluding section.

Options for the organization of post-basic education and training

The broad options for development of secondary schooling and VET can be summarized as follows.

As there is surplus capacity in much of the former 'white' suburban secondary school system, including boarding facilities in many small town schools, there is scope for developing these, along with select township and rural schools, as expanded secondary academies of quality, access to which would be governed by competitive examinations conducted at the end of Std 7 or 8. This 'German model', in which secondary schooling in preparation for higher education is provided to perhaps a quarter of all young people, implies two further systemic reforms. The first is that good-quality basic education should be available everywhere, so that access to higher education would not be the exclusive preserve of urban élites. The second is that VET opportunities, formalized in industry-managed apprenticeships in the German 'dual system', should be

available to school-leavers who do not gain access to secondary academies.

In effect this model rests on the assumption that intellectual talent is best nurtured in specialized academies, while non-academic vocational preparation requires a combination of work experience, training, and VE after basic schooling. Priority, within secondary schooling, is given to the nurturing of academic expertise. The implicit cleavage between an academic élite and other 'classes' is an obviously undesirable feature of this model. In Germany and elsewhere this division is softened somewhat by AE opportunities to complete academic schooling and proceed to university. Indeed, in recent times in Europe, graduates from 'academic' tracks have increasingly opted for vocational training in view of work prospects or preferences: this kind of flexibility can be retained. The advantages of this model are that good-quality secondary and higher education is secured, and — in its successful variants — vocational education and training are well managed and appropriately targeted because they largely fall under control of chambers of commerce and industry.

A second option, which might be characterized as the 'American model', rejects the notion of institutional specialization and requires a diversified curriculum in all secondary schools and similar choices offered to all children. Post-secondary colleges and universities, similarly, offer a very wide variety of part-time or full-time, two-, three- or four-year diploma or degree programmes, followed by diverse graduate study options. This is an attractive model on equity grounds, as it appears to avoid institutional stratification of education opportunities, and it leaves choices amongst academic and vocational options, or between subjects at different levels of difficulty, to students. The United States experience indicates, however, that it is extraordinarily difficult to avoid curricular 'tracking' emerging within diversified schools and it is also hard to combat the differences in resources and quality which characterize schools in differing localities. It is argued by some commentators, however, that the diversification of secondary schooling in the United States has led to deterioration in average attainments in language skills, mathematics, and general knowledge of school-leavers. In the South African situation, this option would imply a substantial commitment of resources to expanding the secondary school system and increasing the curricular options available, particularly in non-suburban schools. The diversified school is a high-cost option, which would probably require a deliberate shift of government

spending and personnel from universities, technikons, and colleges to secondary schools.

The strength of the United States education system is the diversity and flexibility of college and university programmes and the active 'market' for non-formal training and AE activities. These keep the system responsive to changing needs and priorities, and there is a persuasive case that the American 'community college' should be taken as a model for the development of adult and vocational education colleges in South Africa.

An 'Asian model', thirdly, in which diversity is met through a variety of kinds of secondary schools or colleges, can be described. Both in socialist China and in capitalist Taiwan, vocational schools are important alternatives to general senior secondary education. Vocational schools or colleges offer a broad curriculum including core language and social study courses, but have a strong 'career orientation', often maintained through close links with industry and commerce. Vocational colleges can provide both formal schooling for full-time students and non-formal options for adult learners. South-East Asian countries have long traditions of both good-quality basic education and formal craft training, which may be important prerequisites for this model.

It is clear that VE has been a major strength in the impressive industrialization records of Asian economies, and it is notable that growth has been associated with markedly improved income distribution in these countries. The substantial role of secondary schooling in career preparation is one reason for high productivity and improving incomes of South-East Asian workers. This option is envisaged in the 1981 HSRC *Investigation into Education* report on technical and vocational education, which advocated 'career colleges' to prepare scholars for industry, agriculture, commerce, or teaching, for example. The model implies that existing technical and vocational colleges should be expanded and upgraded, and select high schools transformed into specialized career-oriented colleges.

The 'Latin American model', finally, gives emphasis to non-formal VET. The strength and flexibility of non-formal education and training in countries such as Brazil and Mexico is, in part, a response of employers and workers to deficiencies in the quality and availability of schooling. Limited post-basic schooling opportunities encourage young people to look for work and training early, and employers invest heavily in the training and retraining of employees. Technical and vocational colleges may receive partial support from

the state, but are often largely financed through fee-paying students and contractual training arrangements with employers. Training is often accompanied by day-release or after-hours continued formal education, much of this provided by private or non-governmental ventures. Countries vary in the extent to which co-ordination of training standards and certification are regulated by government: weaknesses in this regard work against mobility of workers and adequate investment in general vocational skills.

The principal advantage of this model is its flexibility and adaptability to changing technical requirements of industry. A further advantage, particularly relevant to the South African context, is the robustness of this model in circumstances where the quality of basic schooling is low. Developments in industrial training in South Africa during the 1970s and 1980s have largely been non-formal and industry managed. This is an option suitable when good-quality secondary schooling is not available to all, and it works best when there is extensive institutional interaction between schooling, VET, and AE.

The distinctions between these 'models' are obviously not clear cut. There are features common to the Asian and German or Latin American approaches, and the diversity of VET institutions in South American countries is a similarity with the United States model. There are substantial differences amongst Latin American or Asian countries in their education and training systems. Recent 'career pathing' reforms in the Australian VET system combine aspects of the Asian and German systems. Approaches to training and VE change rapidly in dynamic economies, driven in part by the increasingly international character of technologies and industrial skills requirements. Schooling systems tend to be more static and in the organization of schools there is less variety internationally. However, here too, global trends cannot be ignored: literature, computer use, film and television media, and international commerce all impact on the content of schooling and learning technologies world-wide.

None of these models provides an obvious 'solution' to the South African education and training challenge. The German option is attractive for the high quality of academic schooling and VE it assures, but would be hard to reproduce in the absence of a strong tradition of formal vocational training. American-style community colleges might be an appropriate direction for development in South Africa, but the diversified American high school is unaffordable as a national model. Specialized career colleges with close links to

employers, as in the Asian model, already exist in several sectors in South Africa — agriculture, mining, teaching, and nursing, for example — and might be established to serve industry and commerce. But industrial employers have tended to favour non-formal, Latin American approaches — for example, in-house training by banks, or building industry training schools.

We move on to consider secondary schooling, VET, and higher education separately. As the above 'models' indicate, options within each of these areas must be assessed in relation to envisaged developments elsewhere in post-basic education and training. A balanced education and training system will probably involve elements of all of these models, but there will be hard choices to be made between emphasis on, and resources devoted to, secondary schooling, post-secondary colleges, AE, and university and technikon education.

Differentiation in secondary schooling

There is, implicit in the above, a tension between the provision of a common, general education for all and the differentiation of the curriculum to cater for students' differing interests and abilities. Expressed in other terms, there is a tension between equality of provision and choice. There is also a tension between the quality of secondary schooling and the extent to which access is afforded to all. The difficulty is compounded by the fact that schools are not neutral arbiters in the matter; they strongly influence and shape the performance and choices of children. When differentiation is effected through separate institutions or different kinds of secondary institutions, then education all too easily reinforces class stratification. Differentiation, as previously noted, may deepen rather than reduce social inequalities.

However, a wholly undifferentiated system negates real differences in students' abilities, interests, and backgrounds, and privileges the median performer. Raising standards and insisting on a common curriculum does not enable disadvantaged students to succeed. A differentiated curriculum or work and training options, sensitive to the variety of students' needs and abilities, can provide opportunities for self-realization to diverse individuals. There are clearly also links between the content appropriate to the secondary school and the qualitative upgrading of the entire school system — particularly in critical areas such as mathematics and science.

A further consideration is the danger that a curriculum too rigidly constrained might stifle rather than stimulate creativity and intellec-

tual growth. It is important, if schools are to serve their students and society effectively, and if teachers are to be challenged to teach well, that the curriculum should strive to provide flexibility and choice.

On one analysis, a future post-basic secondary school phase would need to accord considerable weight to a differentiated curriculum, creating opportunities for young people to pursue not only academic but technical, technological, commercial, and other broadly vocational directions. This would necessitate considerable adaptation and development in existing schools, together with a more effective use of the existing technical colleges. The need to guard against creating a more prestigious academic secondary school or curricular track, and a separate, inferior vocational track, would require the maintenance of a common core of language, mathematics, and science in all schools. A differentiated secondary curriculum aimed at maintaining 'parity of esteem' between different curricular paths would be costly and difficult to achieve, but is an option that warrants careful consideration.

An alternative approach would be to concentrate on the effective delivery of a core general secondary curriculum, while fostering tertiary colleges and other out-of-school education and training programmes for a wide range of careers and a diversity of sixteen-to-nineteen-year-olds and adult learners. This scenario would accept that differentiated schooling would essentially be limited to more affluent, better equipped suburban schools and to particular local or regional initiatives. For the majority of secondary schools, and the majority of learners, the formal school curriculum would remain relatively limited in scope. Post-school opportunities however would offer much greater diversity and flexibility.

A case for a variant of this approach, described as a 'late-selection, high-participation' system of post-compulsory education and training is developed in a report prepared for the research group. A unified curriculum, such as the Advanced Diploma or 'British Baccalaureate' proposed by the London-based Institute for Public Policy Research, offering a strong general education programme together with a range of theoretical or applied elective modules within a single qualification structure, might obviate some of the undesirable features of differentiated or diversified systems, whilst still allowing for flexibility and choice. The broadening of such a programme beyond the bounds of the secondary school, to include post-secondary colleges, could further promote flexibility and extend the range of options available.

A three-year senior secondary school would be the final phase of the alternative structure for South African schooling envisaged above, along with a range of further education and training opportunities for those who leave school with a Std 7 certificate. A two-year senior phase might be advocated if a ten-year compulsory schooling model were adopted. Retention of the present seven-five school structure would imply either that compulsory schooling should be limited to seven years, or that a full twelve years for all should be the goal.

Whereas the primary and middle schools should arguably be both free and compulsory, it seems unrealistic to envisage free state-provided secondary schooling for all. The wide variety of private secondary programmes and colleges which have emerged in recent years indicates that demand already exceeds the state's capacity to provide post-basic schooling; if extensive progress is made with the quality of primary schooling, as envisaged above, the demand for post-basic opportunities will rise commensurately. It will be crucial to ensure, however, that access to secondary schooling does not become dependent upon income, and that state support is provided to the children of poor parents. Support for such children will be a major form of redress and the redistribution of opportunities.

Post-secondary colleges

Government-funded technical colleges, education colleges, colleges of agriculture and forestry, and nursing colleges enrol about 200 000 students at present, taking in perhaps 50 000 new entrants each year. This is about a quarter of all senior certificate passes, and hardly more than 5% of school-leavers each year. Although technical colleges continue to offer an alternative to the general senior secondary curriculum, they increasingly offer post-secondary options. While Std 8 was sufficient for admission to several teacher-training, nursing, and apprenticeship options 20 years ago, a senior certificate is the minimum for just about all post-secondary courses now.

Outside these colleges, technikons, and universities, there is little further VE. Some technical colleges offer incidental night classes in commercial or other subjects, but the variety and availability of AE learning opportunities are far below potential demand. If the secondary school is not to take on a wide range of career-oriented programmes, then post-secondary colleges must be expanded to meet VE needs. If formal secondary schooling remains out of reach for

significant numbers of people, then post-secondary colleges are probably the best institutions to offer adult basic and secondary education courses. Even if non-formal training remains the predominant mode of skills development in the private sector, there will be a substantial role for well-managed, flexible colleges to provide formal instruction complementing in-service training.

Developments in the post-secondary college sector will be central to the choice or emergence of a strategy or 'model' for post-basic education and training in South Africa. If colleges continue to be rigidly controlled and weakly funded, employers and workers will have to look to other sources of support for adult education and training. Growth of a flexible and innovative college sector, on the other hand, could lead the way in shaping VET courses and introducing AE programmes.

The first reform must be removal of responsibility for colleges from ethnic 'own affairs' departments to a national department, perhaps with joint responsibility for education and training. A second key governance issue concerns the answerability of colleges to the communities which they serve: without formal accountability to local authorities or other civic structures and local chambers of business, technical colleges, for example, are unlikely to become adequately responsive to local community education and training needs. Colleges which receive financial support locally, and which have the freedom to adapt their activities to local requirements, are more likely to be run flexibly and innovatively than highly regulated and centrally funded institutions.

There is an important co-ordination function of central government in PSE, particularly in the assessment and validation of programmes and establishment of a common certification structure. This applies both to VE and ABE, but flexibility and sensitivity to changing curricular needs should nonetheless be maintained. A further co-ordination issue is the articulation amongst institutions of PSE, which must be sought in the interests of improving spatial and occupational mobility of students and workers. Rigid distinctions between colleges, technikons, and universities should be countered, perhaps through co-operation agreements and exchange arrangements amongst institutions.

Integration or articulation of education and training, facilitated by the establishment of a single department of education and training, together with a joint qualifications board and common certification structure, would encourage the development of the college as

a bridge between education, training, and work. Existing technical colleges offer an obvious starting point for the development of flexible, innovative institutions of this sort, but there is also a wide variety of private and non-governmental education and training programmes or institutions which should be recognized and appropriately supported.

Diversified technical colleges might become a major means of expanding access for those who currently do not persist into the senior secondary phase, or who leave school after completion of compulsory education, or who wish to return to studying in later life. An 'honours' or 'transfer' division within such colleges might lead on to higher education at a technikon or university; though the challenge of ensuring effective transfer, and of avoiding the tracking of disadvantaged students into 'second-best' institutions, should not be underestimated.

There are important links between the development of universal good-quality, general education, through to at least Std 7 or 8, and broadening of access to post-secondary VET. There are various options for differentiation within the secondary school and college system, ranging from a diversified institution-based development of formal VE options in schools and colleges, to more flexible approaches locating modular vocationally oriented electives in secondary schools and community colleges, within a common curricular framework and qualification structure. On any view, however, policy must proceed flexibly, in progressive phases of development, aimed first at the meeting of basic, common objectives and then at their elaboration into a more flexible and responsive system.

Restructuring higher education

Developments in secondary schooling and post-secondary college education are linked, furthermore, to the changing organization of the higher education sector, comprising universities and technikons. These currently enrol some 400 000 students, taking in about 60 000 new entrants each year, roughly equivalent to all matriculants. Admission to some diploma courses, principally offered by technikons, does not require matriculation, while access to some university programmes requires substantially more than a basic matric pass.

There are broadly two alternative paths for development. Upgraded technical colleges and other post-secondary institutions could be developed and expanded systematically, providing an exten-

sive range of study and training opportunities to school-leavers, in which case universities could remain 'academic' in their curricular orientation and highly selective in their enrolments. This option would complement retention of a high-quality general academic stream in secondary schooling, as in the German model. It is also consistent with a South-East Asian route, in which specialized post-secondary colleges take up a large proportion of school-leavers.

Alternatively, universities might continue to grow, in which case they will have to broaden their activities to include vocationally oriented courses offered to students of varying abilities and career prospects. In the American and Latin American models, institutions of higher education vary greatly in standards of student intake, range of degree or diploma programmes offered, and quality of teaching and research. Individual institutions, similarly, can offer a wide variety of options, from highly specialized research-oriented degree programmes to flexible short-term training or community-interest courses. There are good arguments for both of these options.

Universities are already well established, attract large numbers of students who do not have high-level academic aspirations or potential, and already offer many degree or diploma courses which are more 'applied' than purely scientific. Technikons are similarly organized and financed to universities, and mobility of students between these two classes of institution would be facilitated were the statutory and functional distinctions between them eliminated. It is also arguable that South Africa cannot afford to supply the resources and academic expertise to sustain the existing university system at acceptable international standards of excellence, which implies that some part of this system should be redirected to alternative education purposes. These considerations support the adoption of a more permissive approach to university and technikon curricula and courses, greater integration of academic and career-oriented education, and diversity in the financing, management, admissions, and standards of institutions of higher education. If the university system moves in this direction, it should be expanded and financed accordingly.

Within universities, however, there is strong resistance to the dilution of traditional academic activities and standards. Government has in recent years insisted on 'rationalization' within the university sector, with the emphasis on curtailment of vocational options deemed to be the preserve of technikons. It is apparent that the ethos of the university does not lend itself to moulding in the shape of a vocationally oriented college. A case can be made for universities to

retain their traditional functions, and for VE and less rigorous or scientific general post-secondary study options to be developed in institutions appropriate to these purposes. Upgrading colleges might be an easier and more effective strategy for diversifying PSE than trying to change the universities. Technikons and some technical colleges are growing rapidly, and could extend their activities into liberal arts and other general AE options. If the university system is too large, then some of the present universities could be disestablished and reopened as colleges of education or community colleges.

It needs to be stressed that universities are prestigious and influential, and have strong vested interests which will bring various pressures to bear on the state. Established universities have claims on the state as centres of excellence, and the newer universities, with predominantly black enrolments, base their claims on redress of historical disadvantages. Pressures to sustain enrolment growth and keep fees low come from parents and students due to the considerable status and privileges which attach to university qualifications. Universities throughout the developing world, subject to increasingly severe financial stringency, have suffered declining standards of teaching and research, alienation from government, and internal discontent amongst staff and students.

To avoid this prospect, substantial reorganization of South African higher education will be required, for present trends are unmistakably in this direction. Universities are in financial difficulties; the quality of research and teaching at different institutions varies greatly; university libraries are having to curtail journal and book acquisitions; large numbers of students either fail outright or take extra years to obtain their degrees.

Neither of the approaches outlined above will be easy: one involves strict rationing of university activities and resources while establishing a range of alternative colleges; the other involves changing substantially the nature and activities of all or some academic institutions. Financing arrangements, admissions requirements, regulations governing establishment and recognition of degree and diploma courses, rationing of student places, and review or course assessment procedures, are amongst the regulatory instruments available to the state and to institutions of higher education for bringing about appropriate changes. Higher education policies vary greatly from country to country, and must move with shifting student needs, professional and industrial demand for personnel, and changing research priorities.

There is a deep tension here between the autonomy of universities and technikons, which carries with it the important principle of academic freedom, and the regulation of the higher education system through financial provision, accreditation of degree and diploma programmes, and co-ordination of admissions, which must be aimed at securing an appropriate mix of academic development, independent scholarship, training of high-level personnel, and applied research. How universities and technikons are governed, and the nature of their formal links with community authorities, industry and commerce, other education and training institutions, and government departments, will critically affect trends in the organization of higher education.

One such link is important enough to warrant special mention. Universities and colleges of education, as the leading institutions in curriculum development and teacher training, need to be actively and widely involved in school development and in-service teacher support. These links clearly must have a regional or local focus, and will be facilitated by an end to the fragmentation of education administration. There are programmes at many universities and colleges on which to build, often associated with arrangements for practical teacher training, but as historically white universities have traditionally served white schools while colleges training black teachers have been under-equipped and poorly staffed, the dynamic linkages which should drive progress in education have been frustrated.

Universities, education colleges and other institutions, including NGOs, need to be brought systematically into the development of township and rural schooling. In-service teacher support, curriculum change, supply of teaching materials and school-books, maintenance of buildings and facilities, school administration, testing and assessment, care for handicapped and disturbed children, guidance and extra-curricular programmes are some of the areas of need in which institutions of higher education can contribute to qualitative change in black schooling. Co-ordination of development probably requires some form of local or regional education governance which can finance and direct the involvement of universities and colleges in supporting schools.

Non-formal vocational education and training

The traditional 'co-operative' model of VE in South Africa locates responsibility for theoretical tuition with state-financed colleges while

employers provide on-the-job experience and instruction. While VE has moved, in recent years, away from the work-place towards the colleges, with decreasing involvement of employers in the system, training has moved, in effect, away from education institutions towards industry-managed training centres.

These are undesirable trends, resulting, on the one hand, in the growth in numbers of people with vocational certificates of dubious currency and, on the other, in skills deficiencies and occupational immobility in the labour market. Various options for reorganizing VET are possible.

The strategy favoured by the NTB involves considerable devolution to Industry Training Boards, incorporating employers and unions in joint management and co-ordination of training within broad sub-sectors of industry. Employers would largely be responsible for financing and implementing VET in this approach. COSATU favours a much more comprehensive approach to training, with the emphasis on nationally negotiated restructuring of AE, and a strong role for the state and unions in co-ordinating education and training developments.

At issue here are a number of difficult questions about the role of government in human resource development, technical progress, and technology transfer. Co-ordination can be achieved in various ways. In the American model, the market-place plays an important role: training programmes come and go, or are adapted from year to year, depending on what employers and students are willing to pay for; negotiations between managers and workers over training are largely conducted at plant level; certification and standards vary widely; and the role of government is to provide a legislative framework and targeted financial support, but little more. In the German 'corporatist' approach, co-ordination rests largely with chambers of commerce and industry, with active involvement of unions, and training standards are nationally or regionally regulated. Developing countries in South-East Asia and Latin America have adopted varying mixes of market flexibility and state co-ordination of training, depending, in part, on the quality and effectiveness of their schooling and VE systems.

Whether training is best organized within enterprises or in specialized education institutions hinges on other aspects of industrial organization, such as how work responsibilities are structured, the 'general' or 'specific' nature of training requirements, and the overall shape of corporate democracy. Although state subsidization may be warranted, its implementation is complicated by monitoring

problems and the technical complexity of many training activities. As technologies become more internationally mobile, training methods and programmes tend to accompany multinational investment and industrial plant renewal, rendering traditional approaches to skills development redundant. This serves to highlight, however, the comparative disadvantage South African employers face because of the qualitative deficiencies of basic education and general vocational preparation of much of the labour force. Approaches to VET under these circumstances might include the following.

- ☐ As in the Latin American context, training can be broken down into intensive modules, aimed at developing specific, criterion-referenced skills, adapted to particular work situations. Standardization of certification and ongoing ABE both contribute to improving worker mobility within this system.
- ☐ Strong emphasis on communication skills and basic numeracy can be included in VET programmes, compensating in part for scholastic background, but contributing also to worker mobility and later on-the-job learning.
- ☐ In the absence of reliable scholastic ability screens, employers can introduce aptitude and learning ability tests; the provision of testing guidance services by independent agencies can contribute both to the efficiency of job placement and reducing job search costs.
- ☐ The state can support specialized institutions, aimed not only at meeting occupational training needs, but also at improving industrial organization and small business development, providing a comprehensive set of support services aimed at employment creation.

International experience indicates that, while markets tend to underprovide general training as employers prefer to 'poach' trained personnel rather than offer training themselves, state training institutions tend to be inflexible and inefficient, inadequately responsive to changing technical requirements. Financing and regulatory measures are needed to bring appropriate pressures and inducements to bear on the private sector to invest sufficiently in human development: the governance of VET is largely about ensuring that general skills are reproduced alongside the specific skills fostered in the market-place.

Certification and standards

Whether or not emphasis is placed, in policy terms, on the development of a differentiated secondary curriculum, or on the growth of post-secondary colleges and further education opportunities, a revised system of national certification, probably at the Std 7 or 8 and at the Std 10 levels, will be required. A new system of certification should emphasize progression and empowerment, not simply selection, and should not be dominated as at present by university admission screening.

Should a nine- or ten-year basic schooling structure be adopted, an externally validated national intermediate certificate would be required at the Std 7 or 8 level. This would be a substantial, and no doubt controversial, break with the past, and should be accompanied by a clear commitment by the state to secure access to good-quality basic education for all, and to support a wide range of post-basic education and training options.

Examinations and certification, when well designed, serve as incentives to students and teachers, provide competitive entry screens to higher education, and provide important information relevant to career and training choices. Both fairness and efficiency demand reliable and sensitive testing of abilities and attainments, but based on adequate student preparatory instruction. The manifest unfairness of the present system of school-leaving certification derives both from the uneven quality of the examination itself and the enormous disparities in the quality of schooling that candidates receive.

If something resembling the German secondary schooling model is adopted in South Africa, then the (Std 10) university entrance examination would only be written by candidates who had come through roughly comparable senior secondary academic preparation. This makes for a fairer admission test than is possible in more open secondary school system, but at the cost of some exclusivity of senior secondary schooling. If universal schooling through to Std 10 is sought, either in a system of diversified 'American'-style high schools or in an institutionally differentiated system, as in the 'Asian' model, then university entrance screening should probably be separated from school-leaving certification, both in the interests of efficiency and fairness. In an institutionally differentiated system, schools or vocational colleges might prepare students for a variety of school-leaving certificates. In a 'Latin American' model, in which the quality and content of schooling and VE are likely to vary greatly, examinations

and certification should be cumulative in nature, with multiple opportunities for registering achievements and competencies.

A serious obstacle to the development of an effective system of non-formal and adult education is the current lack of national standards and certification, giving recognition to the work undertaken by non-governmental and service organizations. A proper certification system for non-formal and adult education programmes is essential if they are to gain acceptance within the formal education system, the training system, and in the labour market. Only in this way will student mobility be facilitated.

The certification and monitoring of standards of post-secondary qualifications and VE are complicated by the varying roles that certificates play in the labour market. Where qualifications are closely linked to remuneration in secure jobs, such as in many formal trades, teaching and nursing, and some industrial occupations, rigorous maintenance of standards across institutions is needed. Criterion-referenced tests are often appropriate in such cases. General technical and technological competencies, usually certified through trade tests after formal and in-service training, can be certified on the basis of work experience, coupled with appropriate on-the-job skills testing. Where the labour market is more flexible, such as in business, law, and the creative arts, differing content and standards amongst institutions is arguably desirable and certainly unavoidable, and norm-referenced testing is appropriate.

These broad distinctions cannot, however, do justice to the complexity of issues associated with the certification of VET. As COSATU and various writers have argued, training standards and certification need to be brought within the ambit of organs of industrial democracy, with appropriate representation of both employers and organized labour. Restructured industry training boards are a possible institutional base for this, and need to be given discretionary powers over course content and standards. Review is needed of the responsibilities of the DNE, the Department of Manpower, industry training boards, and the statutory certification councils.

There are, in sum, several ways in which examinations and certification can contribute to progression and student mobility, and in which greater articulation between institutions and between the formal and non-formal sectors could be achieved.

Bridging and counselling programmes

For those who leave the school system before or after twelve years of

schooling and for students faced with choices in curricular options in the secondary phase, there is a critical need for career and study guidance services. The 'point of transfer' between education institutions or between school and work needs to be supported by good information, counselling, and appropriate bridging programmes.

One approach to this is the establishment of 'education resource centres' to provide local counselling services and to serve as link with industry and commerce, state programmes, and the AE network in the area. The importance of linking school counselling with job placement is a strong argument for such institutions to be located outside specific schools. It is worth noting that labour market and training information, particularly for middle and lower level occupations, tends to be underprovided by markets, which in turn increases the risks to both employers and work-seekers of job placement and training. Further education and training of the Std 7 school-leaver will not be realized in practice in the absence of a strong supporting service.

Similar needs exist for adults returning to education and training institutions, and in the context of technical and social change the information gaps that adults face in career or other moves can be considerable.

At the interface between formal schooling and post-school education and training it is imperative, if the past is to be redressed and discrimination removed, that there should be flexibility of transfer, mobility between institutions, and bridging support. This applies as much to adult learners or apprentice trainees with weak scholastic backgrounds as it does to candidates for admission to university or professional training programmes. Special courses in language and communication and in mathematics or commercial arithmetic are examples for which diverse needs exist, and a wide variety of approaches to meeting such needs should be pursued.

Options include 'summer school' study programmes offered during vacations on school, college, or university campuses, after-hours or correspondence modules, intensive induction programmes, and ongoing academic support programmes. There is a considerable role here for NGOs and privately financed ventures, and in view of the flexibility required, state support might best be channelled through independent resource centres or institutions.

In some form, a 'resource centre structure' or national network of information, counselling, and bridging services, alongside a 'national certification structure' covering both school and adult learners, is

needed to provide order, mobility and overall coherence to the education system, and to facilitate the interface between learning and work.

Access, selection, and affirmative action

Access to education and training opportunities is the outcome of a complex interplay between the choices exercised by individuals and the rules or criteria of selection adopted by education institutions or employers. Access depends also, of course, on the existence and distribution of learning opportunities and how they are financed.

Education institutions with limited capacity, or employers who require a limited number of trainees, can adopt various selection strategies. If an intake strictly representative of the population is sought, a random selection is appropriate. If performance of the group is to be maximized, then selection should be based on suitable tests of ability or potential. If both representativeness and performance are important, and if average ability or potential differs between separable groups, then employers or education institutions will take account of both measures of ability or potential and group membership. Affirmative action is the adoption of different selection standards of ability or potential for distinct groups of candidates for enrolment or employment.

There is clearly a strong case to be made for affirmative action in South African education and training on grounds both of historical redress and of contemporary equity. Affirmative action in education and training, which are important channels for public redistributive social spending, can, to some extent, correct for racial and other imbalances or inequities in social spending and the distribution of social capital.

Options for implementing affirmative action need to be critically examined, however, as the costs and consequences of particular policies are often indirect and not obvious. Improved access of disadvantaged groups to high-status academic education, for example, is a dubious privilege if alternative training options would have led to better job prospects.

There is an important role for the state in co-ordinating the overall balance in access to PSE options. Although comprehensive manpower planning is too inflexible a tool to provide precise breakdowns of education requirements, some planning and regulation of access is required, as the signals on which individuals base education and training choices are highly imperfect indicators of social needs.

Education policy needs to ensure that adequate numbers are enrolled and that levels of training in key fields such as engineering, mathematics and science (including teacher training in these disciplines), industrial design and technology, and commerce and administration are adequate, and needs, conversely, to ensure that excessive erosion of the currency of qualifications does not occur in popular humanities.

The correction of racial or other group imbalances in access to education opportunities is in some respects an extension of this broader function of education planning. In fields such as education, social work, journalism, medicine and nursing, public administration, and commerce, there are sound cultural and social grounds for pursuing representativeness. There are, by way of contrast, no particular spillover benefits from strict racial balances in numbers of actuaries, engineers, or crane-drivers.

It is clear, however, that the broader the range of occupations and education programmes to which disadvantaged groups are preferentially admitted, and the more ambitious the targets for racial equity, the greater will be the costs of affirmative action in terms of dilution of entry standards. Careful attention is required with regard to the choice of programmes for affirmative admissions, accordingly, and to links with labour-market conditions.

There is much to be said, finally, for improving the mobility of young students and adults through greater articulation amongst post-secondary institutions and qualifications. Access to 'higher' courses or alternative institutions should rest not on the purported status of particular certificates, but on genuine assessments of competence, suitability, and merit. This argues for space for discretion in the selection policies of education institutions, but discretion exercised within a national policy on overall admissions trends.

Financing and management

The financing and management of post-basic education and training must reflect the diversity of interests and needs to be met by education institutions and training programmes. Private financing makes sense if benefits are largely appropriated by the individuals or enterprises involved; public financing is warranted if benefits are widely dispersed or access of the poor needs to be assured. Most education and training activities involve some mix of public and private benefits.

The ownership and management of the 'supply' of education and training are strongly influenced by financing arrangements, but there is no necessary relationship between financing and ownership. Firms or individuals can purchase education or training from public suppliers ('fees' for courses offered by colleges or universities, for example) and the government can purchase from private suppliers ('per capita' subsidies or vouchers for schooling, or contractual training schemes). 'Private' institutions or programmes need not be profit seeking, furthermore: ownership of colleges or projects can vest in trusts, non-profit ('section 21') companies or other forms of NGO. Education policy involves both choices about levels of subsidy of various kinds of education and training, and choices amongst alternative institutional arrangements for provision.

The financing options available to the state are the following.

- ☐ Government can finance education directly through on-budget departmental outlays on provisions and personnel for government-owned institutions or programmes. Costs can be wholly or partially recovered through user charges.
- ☐ Government can indirectly finance education through on-budget transfers to education institutions, or training subsidies, based on budgeted costs or enrolment-based subsidy formulae. Ownership of indirectly funded institutions can vest in the state, local authorities, private companies, or trusts.
- ☐ Government can subsidize students through bursaries ('vouchers'), grants, low-interest loans, or loan guarantees for approved programmes, with or without work obligations.
- ☐ Government can provide implicit subsidies for approved education or training activities through income tax deductions or allowances, either to companies or individuals.
- ☐ Government can provide capital funds, or guarantee loan-funding, for off-budget development programmes providing support for education and training programmes.

These alternatives are associated with different degrees of bureaucratic regulation and control of education or training activities. Direct departmental spending is subject to detailed financial controls, for

example, whereas transfers to state-aided institutions give greater autonomy or flexibility to school principals or trustees, relying for control on standard audit requirements. Student bursaries are formally equivalent to enrolment-based subsidy formulae, but may be accompanied by different forms of regulation of education institutions or restrictions on student choice. Off-budget development funds can be given considerable freedom from bureaucratic restrictions, thereby promoting innovation but with some loss of state control.

Governments often finance capital and recurrent costs of education and training institutions in different ways, and typically provide varying levels of subsidy relative to costs of differing education or training activities. Cost recovery can be from employers, students or trainees, or both.

There are further policy issues. Government financing could be centralized, or some responsibility for education financing could be devolved to regional or local authorities. Transfers to education institutions or lower levels of government could be open ended ('block grants'), or could be tied to particular spending categories or purposes (for example, teacher salaries). State grants could 'match' funds raised from other sources, thereby encouraging local fund-raising and involvement in projects. Subsidy formulae could take into account various factors other than enrolment numbers, such as location, student success rates, input costs of courses, other sources of funds, or research outputs. Student loan schemes could be supported by government insurance funding, and bursary programmes could be state financed. Loan repayments could be linked to earnings, or income taxation (a 'graduate tax'), or type of employment. User charges and bursaries could be means tested. Tax options include exemption of education institutions from local rates and other taxes, income tax credits or deductions for education and training outlays, and tax deductions for donations for education purposes. Grants received by education institutions could go into financing current expenditure or to endowments which yield future income. Training could be paid for directly by employers or employees, financed through industry-wide levies, and could be subsidized by government in various ways.

There are many alternative combinations of these various financing options, and arrangements vary greatly between different countries. It is worth noting also that, although changes in education finance can certainly affect the distribution of access and burden of costs of education, these effects tend to dissipate over time as compensating changes in taxation, earnings patterns, and household

spending work through the economy. Increases in state spending on education lead to tax rises; increased user charges or graduate taxes lead to higher salary demands; employer-financed training tends to be associated with reduced wages and taxes. In the short run, changes in financing arrangements can have powerful redistributive effects, but in the long run, public and private finance must follow effective demand for education and training.

Education finance is nonetheless important, both as a critical aspect of education governance and in its distributional and efficiency aspects. Some financing and management alternatives that might improve education efficiency and redress the inequities of South African education provision are considered below.

Consideration might be given to further privatization of the financing and management of secondary schooling and higher education, firstly, on the grounds that state subsidization of privileged opportunities should be reduced and that private provision might be more flexible and responsive to public needs. In practice, privatization could mean several quite distinct options. A total withdrawal of the state from the provision of post-basic schooling has not been attempted in other countries and is neither politically nor economically viable. However, many countries have, in recent years, reduced state subsidization of post-basic education, removed bureaucratic and other restrictions on education and training institutions, and increased the roles of employers, students, parents, and communities in the financing and governance of schooling and post-school education and training. Whether such reforms improve or worsen the access of the poor to post-basic education depends on the details of policy changes. If the state targets its financial support explicitly for bursaries, grants, or loan guarantees for students without private means, while reducing general subsidies for higher education and training, a shift towards private funding could be strongly redistributive. If education institutions become autonomous, governed by a common higher education policy framework, rivalry amongst academies for students, staff, and funding could contribute to progress in education quality and redress of opportunities. If government gives greater powers to industry training boards on which unions are equal partners with employers, this could be to the benefit of workers.

However, privatization will have damaging consequences for both economic growth and redistribution if it involves the replacement of ability to learn with ability to pay as a criterion of access to education, and if academies turn from providing good-quality general

education and training to offering certificates of dubious currency and job-specific forms of training. State funding and regulations need to be directed towards ensuring access of the poor and maintaining good-quality general education and training programmes.

Public policy towards private education needs to be considered alongside options for increasing private funding and involvement in public education. Private schools and non-governmental projects have played something of a 'pioneering' role in curriculum development, deracialization, AE, and more recently, alternative approaches to examining. Private projects aimed directly at growing black demand for alternatives to state schooling have mushroomed in recent years, ranging from precarious 'crash courses' to ambitious new colleges. The regulatory powers of the state over private schools are considerable, however. The state oversees school curricula, the length of the school year, and norms and standards of teacher education. The state also establishes the institutions through which examinations are validated, statistics are compiled, and the teaching profession regulated. Conditions associated with the partial state subsidization of private schooling are further regulatory instruments.

The subsidization of private schools serves to lower average fees, broadening access to the independent school sector. By earmarking the state subsidy for financial support for disadvantaged applicants, affirmative action in private schools admissions might be supported by the state. In several European countries, in which church schools or independent community schools have long received state subsidies, policy has in recent years moved towards uniform per capita state grants for public and private schooling, aimed at widening choice and opening access to formerly privileged academies. The contribution which independent schools have made to good-quality, non-racial schooling in South Africa is an argument in favour of greater state subsidization of the private school sector.

The private and independent schools sector in South Africa is diverse and serves a wide range of distinct community and individual needs. Heavy-handed efforts to eliminate this diversity or break the traditions that give these schools their distinct ethos might lead, as has occurred elsewhere, to migration of élites abroad for schooling and a steady erosion of education expertise and enterprise. There is much to be said for encouraging private and independent schools to build on their non-racial initiatives and education innovations. If governance options for suburban public schools move in the direction of greater school autonomy and substantial responsibilities of school

committees or trustees, furthermore, the distinctions between private and public schools will become less clear cut. Private and suburban schools will continue to serve relatively privileged communities even as they desegregate, and there is a case to be made on redistributive grounds for releasing government administrative and other resources of the burden of servicing these schools.

Private 'street academies', post-school training ventures, and AE projects, although sometimes of dubious quality and intent, have contributed to meeting needs not met by government education departments. Rather than act against such institutions, the state might opt to support them in much the way that established private schools receive subsidies. Clarification of the terms and conditions on which such support would be contingent would go a long way towards giving order to this rather chaotic tendency of recent times.

Three further aspects of post-basic education financing and management stand out. There is, first, the question of funding capital requirements of education institutions. Second, there are important issues in determining remuneration levels of education personnel. Third, the state needs to maintain an appropriate balance between diverse higher education, research, VE, and training financing demands.

Several sources of support exist for investment in education infrastructure, other than central government funds. Renewal and expansion of buildings and other facilities, aimed particularly at improving equity in access to education and training, are strong candidates for support from international aid agencies and private-sector foundations. Government and parastatal financial institutions, such as the Development Bank of Southern Africa and the IDT, are also able to draw on capital market funds for major school or college building programmes. Access of established education institutions to loan-funds can be facilitated by government guarantees. The capacity of schools and colleges to raise support for capital purposes from the communities they serve should not be underestimated, furthermore. Private schools and universities have traditionally relied heavily on donations and bequests for development projects. Income tax deductibility encourages such support. In local communities, resources for school buildings and facilities can come from both cash and in-kind contributions, backed up perhaps by matching grants from the state or education foundations. It is plausible that community involvement in school building projects is both an important source of support for education investment and a foundation on which strong local governance of schooling might be built.

Locally contributed funds can also be used to carry the costs of additional teachers or to 'top up' teachers' remuneration in various ways. Principals or school governing bodies with some jurisdiction over salaries or fringe benefits can retain good staff and reward excellence, whereas when appointments and remuneration are entirely determined by government departments, qualifications and nominal experience tend to dominate promotion and advancement prospects. There is a tension between standardization of teacher salaries throughout the education sector, based on departmental norms, and the role of remuneration in signalling needs and rewarding ability. When a strong teachers' union drives salaries above the levels at which unemployed teachers would be willing to work, the available supply of teachers will be underutilized due to departmental financial constraints. A downward drift of salaries driven by expansion of the education system, on the other hand, leads to exit from the profession of enterprising teachers capable of earning more elsewhere. This problem may be particularly severe in PSE and training institutions, as skills and market opportunities can vary greatly amongst disciplines and individuals. The respective roles and powers of school or college governing bodies, the government education department and representative teacher organizations in determining teacher remuneration are crucial.

Finally, there is the problem of the overall balance on the education budget between competing demands: higher education, post-secondary colleges, support for training, special education, school development, and other needs. An important link between education financing, management, and regulation should be noted here. When state provision is generous, so that the costs of gaining access, for example to universities, are low, then the regulations governing access and standards are critical, because costs cease to be effective constraints on the growth of demand. When provision is largely left to the private sector, on the other hand, then regulation of standards and content can undermine growth, adding bureaucratic constraints to the already effective cost considerations inhibiting supply and demand. For this reason, regulatory change must accompany reductions in state spending on higher education or training.

Both equity and efficiency considerations underpin the case for restraint in state spending on privileged schooling and higher education in favour of qualitative renewal in township and rural schooling and AE. Long-run economic progress must rest on a broad educational foundation, and improvements in the distribution of income and

other entitlements will be facilitated by equity in the quality of basic education. However, good-quality universal schooling cannot simply be bought at the expense of higher education. Progress in teacher education and curriculum development are functions of universities and colleges, ABE largely complements VET developments, and the employment-creating capacity of the economy depends, in part, on sustained output of high-level expertise. The overall balance on the education budget must reflect both broad social, economic, and developmental goals, and the requirements of internal coherence within the education system.

The financing and management of post-basic education and training will involve a complex mix of reorganization of opportunities for pursuit of excellence, specialized competencies, and associated privileges, and redistribution of the costs and benefits of these opportunities. Co-ordination and balance in education financing and management must ultimately be the responsibility of a central government department. But education planning, policy formation, financing, and management need to take account of a wide range of social and developmental interests. Involvement of employers, organized labour, representative education bodies, and other civic structures in the policy process needs to be sought, and is central to the democratic reorganization of education and training systems and structure.

5 KEY POLICY ISSUES IN EDUCATION DEVELOPMENT

It remains to draw together key themes in education planning, systems management, and structure identified in this report. The goals of effective and equitable human development, pursued in the context of a democratic political economy, do not imply a single progressive programme of action. There are choices to be made in many policy dimensions, and several broad policy options in improving basic education provision and post-basic education and training systems are discussed above. The central goals of economic growth, redistribution, and democratic political process point, nonetheless, to some critical policy issues on which agreement between policy players should be sought.

Priorities for resource allocation

There are competing claims on the public fiscus for upgrading basic schooling and AE, developing special education, establishing post-secondary options, and subsidizing higher education and training. Within the schooling or higher education budgets, furthermore, there are difficult trade-offs between quantitative expansion and quality improvements.

This report favours improvements to the quality of universal basic education as a first priority in education development, but leaves open questions of the extent to which policy should move in this direction or the resource flows to post-secondary and higher education which must, of course, accompany progress with basic schooling and AE.

The primacy of basic education follows from principles of both efficiency and redistribution. Basic education contributes to combating poverty, is a fundamental form of individual and community empowerment, and is a gateway to other avenues of development. However, neglect of secondary and higher education, which imperils economic progress, will undermine redistributive efforts and so this is not a straightforward choice between alternative growth scenarios. Education's contribution to growth, indeed, takes time to mature, so that the South African economy may require restraint in all aspects of education spending until more confident economic growth has been restored.

It may be worth noting, as a concluding comment on the allocation problem, that the linkages between basic education and post-secondary education and training substantially ameliorate the conflict between these development challenges. When basic schooling delivers effective communication skills and cognitive competencies, further education and training are worthwhile. When universities and colleges provide creative and able teachers and support effective curriculum development, in-service teacher support, and education research, the quality of basic education can be improved. These linkages need to be fostered and exploited.

Differentiation, certification, access, and standards in post-basic education

In post-basic education and training, diversity and flexibility need to be sought along with assurance of standards of competence and reliability of qualifications. Examinations and education certification serve various purposes: within schools they focus work efforts of students and teachers and so have incentive effects; in the wider labour market and in the articulation between levels and options in education and training, they serve to register information about students' abilities and cognitive attainments. Education standards serve to protect the currency of certified qualifications within the education system, in domestic labour markets, and internationally. The registration of education institutions, the accreditation of examining authorities, and the validation of examinations or vocational tests by independent bodies all serve, one way or another, these broader purposes of providing incentives and information, to learners, parents, teachers, education institutions, and employers.

The qualifications structure in South Africa is fragmented, eroded, insufficiently regulated, and incomplete. Options for reform which relate to the overall governance of education and training include the following.

The case for establishment of a unified statutory qualifications board, charged with responsibility for monitoring and validation of all qualifications, is that this would facilitate assurance of the comparability of qualifications and accordingly would ease improvements in the mobility of learners between institutions and study programmes. It is also possible that only a national body would have the status and power to give effect to standardization of qualifications in a context of considerable institutional diversity, for example

in teacher education, university degrees, and great variety in vocational courses.

Against this view, it is possible that the criteria for validation and standardization of qualifications vary so much between academic and vocational programmes that a unitary board might, in practice, be a weak and ineffective regulatory body. It may be that responsibility for overseeing occupation-specific qualifications should rest with appropriate industry or occupational representative bodies, within an overall training framework, and that school certification and university programmes should likewise be monitored and validated under institutional arrangements suited to these purposes. There are, for example, substantial differences between the kinds of monitoring and standardization which are appropriate to criterion-referenced skills tests and those which need to be applied to norm-referenced examinations of attainment of knowledge.

An obvious case can be made for the monitoring of standards and qualifications to be undertaken not by a departmental body subject to a restricted brief, but by an independent agency free to conduct statistical and related research on request or at independent initiative, and to report regularly on standards and trends. A case for independent testing and examining bodies can also be made, as the quality of information contained in the results of independently conducted tests is generally likely to be superior to the quality of information reflected by results of examinations conducted by institutions responsible for the provision of schooling.

The argument for an independent test is particularly strong in respect of the crucial decisions that most young people have to make at the end of compulsory schooling, and correspondingly, the decisions that education and training institutions and employers make about new school-leaving applicants. Good-quality information about levels of acquired abilities and potential clearly is needed if decisions at this point are to be efficient and fair. It should also be stressed that the costs, consequences, and effectiveness of affirmative action policies can only be properly assessed with good information about student abilities and performance.

In conclusion, distinctions need to be made between qualifications which are read in labour markets and other institutions as signalling specific standards of competence, such as driving licences, teaching certificates, medical degrees, and electricians' tickets, and qualifications which are read as general signals requiring interpretation on individual merits, such as senior certificate passes, secretarial

diplomas, MBAs, and degrees in economics or public administration. These distinctions hinge as much on characteristics of labour markets as on intrinsic aspects of study programmes. Renewal of qualifications structures, education and training standards, and certification processes and institutions is part of education system change and also of labour market reform.

Financing and management of education and training

Arrangements for the financing and management of education and training are critical determinants of equity of access and efficiency of education provision. Appropriate mixes of public and private involvement need to be sought, linked to the distribution of benefits associated with education and the capacity of individuals or households to meet education costs.

Proper balances between state intervention and private initiatives, however, are far from obvious. There are many options within each of the main spheres of education and training: pre-school educare, primary and secondary schooling, AE, VET, and higher education. The state can finance and provide academies, it can establish colleges or programmes which become self-financing, it can subsidize autonomous or private institutions, it can regulate private provision, and it can prohibit undesirable activities. This report indicates that each of these options can be pursued in alternative packages. Powers to make decisions over education and training developments can be distributed in various ways.

The state's ERS and recent changes in policy by the (white) House of Assembly, Department of Education and Culture contain moves in the direction of greater school autonomy, higher fees for privileged schooling, and greater choice in determining school access. In the state's model, however, 'choice' appears not as parental choice amongst schools but as the right of school governing bodies to exercise control of their admissions. Suburban schools can opt to shrink, shedding teachers and classes, rather than expand and open enrolment to disadvantaged children.

Critics point out, accordingly, that privatization will protect racial, ethnic, and socio-economic fragmentation of the school system. A future government concerned to pursue equity in access to schooling might choose to reverse the effective extension of the private school sector implicit in current state policy. In the interests of social integration, equality, and the pursuit of a unified national curriculum

and culture, it is argued, private schools should be discouraged and their autonomy curtailed.

However, the argument that by reducing its subsidization of privileged schooling the state can shift resources to the challenge of improving the quality of schooling available to the poor, needs to be taken seriously. An evolutionary transfer to local school governing bodies of responsibility for the management and financial integrity of suburban schools, accompanied by financial incentives encouraging desegregation and improved access of the poor to formerly white schools, might contribute both to improved school governance and greater equity in the distribution of entitlements to good-quality schooling. It is plainly necessary that government reduce per pupil spending on suburban schools if increased spending and qualitative improvements in township and rural schooling are to be achieved.

Similar arguments apply to the financing of higher education and training. There are limits to the scope of education renewal which the state can undertake at once. In post-basic education, the priority is arguably the development of a broader range of vocational and general education programmes offered by post-secondary colleges. Greater reliance will then have to be placed on the private sector in meeting other challenges such as reorganizing training and financing higher education. Industrial training and higher education bring substantial 'private' benefits, both to learners and employers, and so will attract private financing. However, bursary and loan schemes which ensure that access to higher education is guaranteed to all with the requisite abilities need to be supported. State support for the training costs of some employment sectors may, similarly, be warranted on 'infant industry' grounds.

There are, finally, important roles in education development for organizations driven neither by motives of self-gain nor by the command of the state. In both the financing and management of education, governments and markets need the mediating role of strong organs of civil society. NGOs have important functions in education innovation, in extending informal networks of education support and information-sharing, and in meeting special education needs. This is the civilizing and progressive hand of the private grants economy. There is also a vital role for an energetic public discourse on education policy and progress, and a 'watchdog' function of independent education lobbies and observers, without which education and training all too easily become uncritical servants of both the state and the private sector.

Education planning and policy formation

As stressed elsewhere in this report, there is a complementarity between strengthening the state's capacity to provide and co-ordinate education and training, and strengthening the institutions that keep education and training systems responsive to market signals. The need to improve education quality, to build linkages between education and training, and to co-ordinate a balanced process of system change raise critical questions of participation in planning and policy formation. The extremely poor quality of black education is a central problem of national development. It is important that legitimate political leadership, at the highest levels, should ensure that comprehensive and fundamental qualitative upgrading of the education system is made an integral part of national development strategies. The significance of qualitative renewal encompasses and reaches beyond the issue of redress: it is basic to the development of a thriving economy and a democratic society.

Experience of other countries suggests that qualitative upgrading can be served by empowerment of teachers and school principals, school committees and others directly engaged with the school, to bring about change and encourage innovation. Local and regional support structures must enjoy flexibility and the freedom to exercise initiative if they are to identify needs and opportunities and to respond swiftly and effectively. Sensitivity and responsiveness to the local and regional political and economic contexts is also required. However, the local control of public resources that reinforces power, privilege, and sectional interests may pose serious obstacles to education reform.

'Democratization' of education institutions or of the governance of training is thus a two-edged sword. Control of training and occupational standards given to employers and employees can be used to protect skilled workers against unskilled non-workers; power over school admissions and curricula can be abused to preserve elitist traditions and networks; unchecked expansion of universities and technikons can privilege rising élites at the expense of improvements in the school system. Decentralization of control needs to be balanced by rigorous planning, regulation, and scrutiny from the centre.

There are important co-ordination functions in education and training which can only be performed by a unitary government department, and there is a strong case to be made for bringing education and training together under a single ministry. Planning the overall allocation of public resources to education and training and setting

financial and other norms require centralized decision-making. Education qualifications and certificates of vocational competence, if they are to have general currency in the labour market, must be assured and protected by a national board or statutory body. The accreditation of examining authorities and registration of education institutions and training courses, similarly, should be based on nationally accepted criteria. Improving articulation between education and training, enhancing mobility and transfer of students and adult learners between education institutions and programmes, and developing flexible AE and training institutions, are further functions of an integrated education and training framework.

The ownership and supervision of schools, employment of teachers, and implementation of education system change need not, however, be located in a single national department. Centralization of management of schools might facilitate standardization and a fair distribution of resources, but it is possible that efficiency and qualitative upgrading would be better served by offices of regional or local government. In a decentralized education system, school-level authorities have considerable autonomy and provision of schooling might be the responsibility of regional departments in a federal or unitary polity. It is possible that the dynamics of education development, including curricular change, planning of school provision, equipping and staffing of schools and colleges, monitoring of schooling, and organization of post-secondary colleges would best be served by regional planning and co-ordination.

In any constitutional structure, however, it is important that government should not only play an education management function, but should also promote efficiency-improving innovation and flexibility. Reorientation of education planning and policy formation from bureaucratic to progressive concerns will clearly be facilitated by the broadening of decision-making to include effective and accountable participation of non-departmental interest groups. Industry and commerce and organized labour have obvious contributions to make to education policy formation. Appropriate forums for this purpose, as well as more open and publicly accessible parliamentary debates on education and training matters, would both serve important democratic purposes and help keep education policy flexible and accountable.

This implies a new orientation in education departments: from inspecting, prescribing, restricting, and controlling to researching and designing, promoting change, encouraging development, and driving

education progress. Democracy requires a complex of institutions of decision-making, review, accountability, participation, and control, which are combined in varying ways for different education or training purposes. In governing schooling, policy-makers must respect broad language, cultural, social, and scientific needs; in industrial training, the particular interests of employers and workers need to be flexibly accommodated. There are, nonetheless, some key elements of good governance which apply generally to public policy formation and planning.

One is openness, which means the availability to the public of information about education and training and access to policy formation and policy debates. Far too much information has been hidden and far too many policy decisions have been taken behind closed doors in South African education and training.

A second is dispersion of decision-making powers or discretion, which is a characteristic of developed education and training systems. Flexibility, accountability, and responsibility come with relative autonomy or empowerment at the level of the school, the local education authority, the training centre, or the industry training board.

A third is coherence, which is a quality of balance or order flagrantly violated in the fragmented apartheid education system. Much of this report has been concerned with the internal balances and linkages which must hold together in the transformation of South African education and training. Good governance will largely be about restoring order in a chaotic and incoherent system.

General principles such as these do not provide detailed answers to questions about how education and training should be provided: more substance must be sought in the options for system change discussed above and in other research group reports. Redistribution of education opportunities along with more efficient and effective use of the resources at the disposal of the South African economy can be achieved in various ways. Overall coherence of transformed education and training systems, in balance with developments in the wider socio-economic context, will not emerge in a closed, fragmented political culture, however. Education development requires progress towards democratic processes of public policy formation.

Appendix I

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Appendix 2

Education Planning, Systems, and Structure Research Group working papers

- Archer, S. 'Technological development and the education and training of the labour force in South Africa'.
- Bird, A. 'Redefining human resources development within the context of economic and labour market policies — a COSATU perspective'.
- Buckland, P. and Hofmeyr, J. (EDUPOL). 'The governance of education in South Africa: a working paper'.
- Buckland, P., Kulati, T. and Sayed, Y. 'The Education Renewal Strategy (ERS) Document: analysis and critique'.
- Bunting, I. 'The overall structure of post-secondary education in South Africa'.
- Chishom, L. 'Policy initiatives in South African education'.
- Donaldson, A. 'Content, quality and flexibility: the economics of education system change'.
- Donaldson, A. 'Reorganizing the education system — possibilities for the year 2000'.
- Donaldson, A. with Diskin, Z. 'Regional and racial educational enrolment: demographic and educational statistics'.
- Fisher, G. 'Against vocationalism: the case for a late selection, high participation South African school system'.
- Fisher, G. 'Access to post-secondary education in South Africa: taking the community college route'.
- Fisher, G. 'The reform of secondary schooling in South Africa: general education, quality, flexibility'.
- Fox, W., Schwella, E. and Uys, F. 'Manifestation and remedies of unethical conduct in education'.
- Gilmour, J. D. 'Certification in South Africa'.
- Graaff, J. 'Homeland and rural education'.
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- Hartshorne, K. 'An appropriate education structure for South Africa'.
- Hartshorne, K. 'The present system of education: an analysis and assessment'.
- Kulati, T. 'An examination of the historical evolution of the nation of community participation in education in South Africa'.
- Mohamed, N. and Johnson, D. 'A survey of courses on educational management and training'.

- Perry, H. 'Comparative study of the systems of Administration and Control of schooling in Mozambique, Canada, Sweden, and Nicaragua'.
- Pillay, P. 'Financing education in South Africa: some policy proposals'.
- Sayed, Y. 'A critique of the decentralisation of educational administration: reconceptualising the governance of schools'.
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