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EDUCATION PLANNING and SYSTEMS MANAGEMENT:

An Appraisal of Needs in South Africa

A Consultancy Report
April 1993

Study Team:

Richard Fehnel, Team Leader
Robert Bergmann
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FOREWORD

Over the past two years, the World Bank has undertaken several visits to South Africa to begin exploring the key challenges confronting the education system in the transition out of apartheid. As part of this effort, the Bank has sponsored consultant experts to conduct studies of the issues that South Africans have identified as central to education reform. These studies have been made possible by the generous support of the European Community through the Kagiso Trust, to which the Bank expresses its sincere gratitude. This report on **Education Planning and Systems Management** is the second in the series of studies. The first was on School Construction.

The reports are essentially working papers, meant to frame the issues and provide a touchstone for expanded discussion. While considerable work has gone into each report, the papers are intended to be neither exhaustive nor conclusive. It is hoped, rather, that by compiling and analyzing information that has heretofore been dispersed and in some cases unknown, the reports will help to inform the process of planning for education under a new dispensation. In this vein, they have been prepared in broad collaboration between the Bank and a range of South African educators and specialists. The papers address the programmatic and technical aspects of enhancing education. Issues political in nature are, of course, beyond the province of such work and have been left aside.

The conclusions ot the papers do not necessarily reflect those of the World Bank.

ACKNOWLEDGMENTS

The Study Team wishes to acknowledge the support and cooperation it received during its work. There had been concerns that full cooperation may not be received from all parties, owing to the history of confrontation and opposition which has characterized the education sector. However, that was not the case. Perhaps it is an indication of the depoliticization of education that we experienced openness and cooperation from all. Perhaps it was the effect of an emerging sense among education professionals who simply want to get on with the task of creating an equitable, quality education system and "leave ideology to the politicians". Perhaps it was the result of the preliminary visit by Dzingai Mutumbuka and his colleagues from the World Bank which impressed South African educators with the expectation that the challenges of reconstructing the education system in South Africa will be assisted and supported by international organizations if they feel there is genuine local commitment. In any case, the Study Team received full cooperation and we are grateful.

It is risky to identify individuals for acknowledgment, since there is always the possibility of overlooking someone. Let us simply thank all who participated and supported us, and trust that our sincerity in this simple expression is felt.

A special note of gratitude is given to Kagiso Trust for the support it provided.

Richard Fehnel
Johannesburg

GLOSSARY

ABE . . . . . Adult and Basic Education

Action-training . . . A training strategy emphasizing the development of training content and activities out of the issues and needs which emerge during the training process itself with the primary goal of training being improvement of system performance rather than individual skill enhancement. A focus is on problem solving, rather than rigid adherence to a pre-planned syllabus, through an integration of research, training and consulting.

ANC . . . . . African National Congress

APEX . . . . . Assessing Policies for Educational Excellence

ASN . . . . . Adjusted Staffing Needs

CASME . . . . . Centre for the Advancement of Science & Math Education

CESA . . . . . College of Education for Southern Africa

CfA . . . . . Commission for Administration

CS . . . . . College-School position system; includes professional education positions from primary, secondary and teacher training institutions

CSL . . . . . Current Staff Level

CSPR . . . . . Clerical staff:Pupil ratio

DBSA . . . . . Development Bank of Southern Africa

DET . . . . . Department of Education and Training

DNE . . . . . Department of National Education

FMS2 . . . . . Financial Management System 2

FTE . . . . . Full time equivalent

HA . . . . . House of Assembly (White)

HD . . . . . House of Delegates (Indian)

HR . . . . . House of Representatives (Colored)

HRD . . . . . Human Resource Development

IAF . . . . . Impact Assessment Factor

IEB . . . . . Independent Examinations Board

ITEC . . . . . Independent Teacher Enrichment Centre

MBO . . . . . Management by Objectives

M/E . . . . . Monitoring and Evaluation

MIS . . . . . Management Information System

NGO . . . . . Nongovernmental organization

OFS . . . . . Orange Free State

PCSR . . . . . Pupil:Clerical staff ratio

PERSAL . . . . . Personnel Salary System

PPSR . . . . . Pupil:Professional staff ratios

PSC . . . . . Public Service Commission

PWV . . . . . Pretoria-Witwatersrand-Vereeniging

READ	. . . . . Read Educate And Develop
RIEP	. . . . . Research Institute for Education Planning
RSA	. . . . . Republic of South Africa
SANEP	. . . . . South African National Education Policy
SATB	. . . . . South African Test Battery
SGT	. . . . . Self-governing territories (Gazankulu, KaNgwane, KwaZulu, KwaNdebele, Qwaqwa, Lebowa)
SI	. . . . . Supervision and Inspection
TBVC	. . . . . Transkei, Bophuthatswana, Venda, Ciskei
TTCs	. . . . . Teacher training colleges
TOPS	. . . . . Teacher Opportunities Programmes
TSN	. . . . . Targeted Staff Needs
TPR	. . . . . Teacher-pupil ratios
TUN	. . . . . Training Units Needed
USAID	. . . . . U.S. Agency for International Development

Section 1:
EXECUTIVE SUMMARY

Background Information. The education sector in South Africa is in crisis, and pressures to address education issues will have a high priority in an interim and future democratically elected government. The planning and management capacity of the education system to address these issues is very uneven, due to historical inequities. The forthcoming reorganization of the education system into a unitary structure will require rationalization of existing personnel and a major program to strengthen and reorient staff responsible for planning and managing the system.

Objectives of the Consultancy. The objectives of this consultancy were to take stock of the existing planning and management skills in South Africa's 19 different departments of education, identify likely future capacity needs and related skill areas, make an assessment of existing education management training programs within the country and propose a strategy and program for building up capacity in this area.

Methodology. The consultancy was carried out in two phases by a team of education management specialists. The first phase consisted of extensive reviews of reports concerning South Africa's educational system, and in particular its bureaucracy; visits to 18 of the 19 departments and interviews with key staff; and follow-up feedback workshops with departmental officials and education experts outside government. The second phase consisted of developing a model of analysis appropriate to South Africa's complex environment which could accommodate the information gathered in the first phase. Through this model various scenarios were explored to guide the team in determining what skills will be needed, in what quantities, at what level, and how they can best be developed and sustained.

Main Tasks of the Consultancy: Key Conclusions.

Review and analyze the existing profile of skills in education planning, research and management.

1. Analysis of current capacity to carry out planning, research and management tasks indicates two major problem areas: (a) the number of staff available to carry out tasks, and (b) the "skill profile" of current staff. In general, professional staff allocation reflects the historical pattern of resource allocation, as shown in the ratio of pupils per professional staff by departmental groupings:

Departments	*Pupils per Prof. Staff*
Assembly (white)	*601*
DET (Black/RSA)	*840*
Delegates (Asian)	*1412*
Reps. (Colored)	*1771*
Indep. (TBVC)	*3355*
Self-Gov. Terr.	*3490*

2. The profile of skills also reflects the historical pattern of resource allocation, as judged by how well managed the departments are. The better resourced departments, which have stable enrollments, are well-managed, while the more poorly funded have difficulties in managing rapidly growing and turbulent school systems. The latter departments have fewer staff, and these staff generally have had less access to training. In general, basic planning, research and management capacity is quite strong in the tricameral departments, elements of DET, and one or two of the independent homelands, while other departments need more staff with specific skills in these areas.

3. The profile of existing skills in all departments has been heavily influenced by appointment criteria which have placed high priority on political loyalty, at the cost of technical competence. Anecdotal evidence suggests that there are many qualified staff at the school level who have not been brought into departmental bureaucracies because of this factor. In particular, it appears that women have been particularly affected by this practice.

4. Nevertheless, there is a solid, professional cadre of educational professionals in all departments, many of whom are committed to the development of a new system of education, based on principles of nonracism, nonsexism, and democracy. In most departments there is interest in moving quickly into the transitional phase so actions can be planned which address issues of educational quality.

Assess the planning and management skills needed for the future South African educational system, and estimate the magnitude and nature of the existing skills "gap".

1. Substantial skill gaps are found in all existing departments in the following functional areas: policy analysis, monitoring and evaluation, management information systems, planning-budgeting linkages, public communications, and organizational change. These result from structural "system gaps" in the current departments of education, and without filling these gaps, both in terms of structures and appropriately skilled staff, the educational system cannot sustain hopes of living by new principles.

2. To a lesser degree, most department have substantial skill gaps in areas related to managing special services (particularly in matters related to adult education and counselling).

3. The magnitude of the skills gaps is related to the magnitude of staffing gaps. That is, many more staff need to be added to the system if it is to be managed well. The number to be added and the training needs vary with scenarios and staffing models, but in general terms at least 2,000 professional staff need to be added to the system at the earliest date. Training for at least 2,400 professional staff needs to be offered initially, and for at least 700 per year for the next four years thereafter if the new educational system is to be managed well.

4. A fundamental issue raised by this study concerns the capacity of the education system to pursue changes aggressively. While it is clear from this study that much training will be needed to give people the necessary skills to do things differently under a new dispensation, it is not clear that system-wide motivation to apply new skills can be assumed. There are many bureaucrats who have become accustomed to "perks" which a new system may not be able to afford, and world-wide lessons in bureaucratic reform suggest such gains are not easily given up by incumbent bureaucrats, nor turned down by newcomers to offices of power.

Review and analyze existing training programs for educational planners and managers, in terms of their appropriateness, quality and cost-effectiveness.

1. South Africa has a rich training provider environment, with considerable diversity and skills. However, existing training providers offer limited capacity and capability for addressing the needs identified. Limitations in capacity are in part due to the residential nature of many of the programs. Those which are available on a "distance education" basis lack appropriateness to deal with the challenges of restructuring a new educational system.

2. Other general characteristics of the current context and content of training for education planners and managers include: lack of a national strategy for dealing with the sector's management and planning training needs; the menu-driven nature of most formal training programs; low levels of financial resources for training in departmental budgets, and, consequently, very little of a training infrastructure on which to build future training programs; and, general isolation of NGOs and tertiary education institutions from active involvement in meeting training needs.

3. Considerable effort will be needed to upgrade training capability, in terms of needed content areas, and to expand capacity.

Identify the priority capacity building activities required to bring these skills up to appropriate levels.

1. Create "systems" which fill the identified "system gaps", both in the education planning and management bureaucracy and in the training provider environment, and which are necessary conditions if transformation of the education system is to be achieved;

a. "System gaps" in the bureaucracy are in areas of policy analysis, monitoring and evaluation, management information systems, linkage between planning and budgeting, organizational change, and public communication.

b. "System gaps" in the training provider environment include: (a) lack of a goal-setting capacity related to training needs at national and regional levels; (b) lack

of a strategy to meet training goals; (c) lack of capability to plan, conduct and evaluate training based on appropriate principles of adult learning; (d) lack of mechanisms which link providers and those who need training, and assure effective coordination and accountability on a regional and sub-regional level; (e) lack of mechanisms to link training activities and outcomes to performance goals and incentives at regional, sub-regional, institutional, and individual levels; and, (f) lack of mechanisms to promote and monitor research and development of education training.

2. Create a training coordination mechanism with responsibility for coordinating the planning and implementation of training activities affecting the education sector, and their relationship with other transition activities, such as the efforts to improve the quality of education through teacher training and more classrooms and learning materials.

3. Create a mechanism to formulate HRD policy issues; training needs to be considered within a broader context of human resource development policies. At present there is no effective mechanism for doing this. What is needed is a mechanism which can formulate HRD policy options, guide discussion of these options among key stakeholder groups, and coordinate the exploration of these options with training and research plans and activities.

Analyze options for addressing these identified training needs and make recommendations.

1. The range of training design elements over which options were considered include the following: institutional focus for training planning and coordination; training approach/methodology; how broadly the training mandate should be spread; mix of training providers; where to conduct training; sequence and time frame of training.

2. Key Recommendations concerning each of these are:

a. ***Institutional focus for training planning and coordination.*** *Create a new entity, perhaps on a transitional basis, which can serve as the necessary mechanism to assure linkage among training activities to improve education system management covered by this study, and to assure linkage with the education research and development initiatives underway in many other areas, including training initiatives planned or underway at the school or institutional level.*

b. ***Training approach/methodology.*** *In view of the urgent need to meet immediate training objectives which will impact individual and organization performance, we suggest that an action-training approach be followed, focusing on "critical mass" training in high priority areas, and that this approach be complemented with on-job "training for sustainability" in subsequent years.*

*c. **Scope of training mandate.** The most viable option is for the training mandate to be as broad as possible, within budget limitations, if transformation of management culture is to take place, as well as the development of a system capable of bringing an improved quality of education to all South Africans in an efficient, democratic manner. Breadth of scope is meant to cover a wide range of training content areas which have been identified as having priority, as well as a wide range of employees in all levels of management and all geographic areas of the country.*

*d. **Training providers.** The level of training demand is such, in terms of the numbers needing training and the diversity of functional areas in which substantial levels of training are needed, that there really is no option other than seeking to use the best of all categories of providers, and increasing their capacity and capability.*

*e. **Training locations.** The most viable option is to conduct most training in South Africa, since the numbers needing to be trained are too large to be dealt with in any other fashion. At a more specific level, the option most recommended by staff consulted in this study was to have training brought as close to the work site as possible, and to integrate training needs of individuals with the needs of the workplace.*

*f. **Timing and sequence.** We have suggested an intensive critical mass as the first phase of training, to be followed thereafter by an annual plan of "training for sustainability".*

Design and cost in rough terms a major intervention strategy and program for building education planning and management capacity.

1. The basic strategy suggested by the study team to achieve the goal of an improved management and planning capacity in the educational system has two elements: (a) create a mechanism which can plan and coordinate training activities, and (b) use a training approach best suited to the needs.

*2. It is recommended that the first element be implemented by initiating a **national institute for educational excellence**. Its mission would be to serve as a mechanism for planning and coordinating efforts aimed at improving the quality of education in South Africa, with an **initial** focus on improving the quality of planning and management in the educational system under a new dispensation, and coordinating these efforts with similar efforts at the institutional or school level.*

3. It is recommended that the second element be implemented by an approach which focuses on training critical masses of departmental staff and training providers in the areas defined as systems gaps, and to focus subsequent training on sustaining the structure and activities which fill these gaps.

4. The projected training costs in this approach are between 15 and 20 million dollars for a five year period. The projected costs of a national institute of educational excellence to manage training activities and act as a coordinating mechanism are approximately five million dollars for a five year period.

Section 2:
INTRODUCTION and METHODOLOGY

Objective of the Study

2.0 The education sector in South Africa is in crisis, and both an interim and a future democratically elected government will be under enormous pressure to address a multitude of problems facing the sector. An emergency program to restructure, upgrade, and expand South African education will have to be implemented. The sustainability of such an emergency program and the resolution of many deep-seated problems in the education sector will depend on strengthening the capacity of South African institutions to plan, manage and supervise schools and the education system more broadly.

2.1 The objective of this consultancy was, therefore, to take stock of existing education planning and management skills, make an assessment of existing education management training programs, and propose a strategy for building up capacity in this area.

Methodology

2.2 The consultancy was carried out in two phases by a team of education specialists familiar with the context of the education sector in South Africa. The first phase consisted of an extensive review of reports concerning South Africa's educational system, and in particular, its bureaucracy, visits to 18 of the 19 departments and interviews with key staff. Prior to the scheduled interviews, documentation was sent to departments explaining the purpose of the study and indicating specific areas to be covered in the interviews. All departments prepared for these interviews, with the result that data was collected in a manner which allowed for comparative analysis of education planning and management skills throughout South Africa's fragmented system. Further data gathering from departments continued after the visits, primarily as related to current staffing at departmental head offices.

2.3 The team reviewed departmental publications and other secondary information sources to assess the capacity and capability of present training programs to meet training needs. Visits to selected training providers were carried out. In addition, all members of the team have extensive first hand knowledge of South Africa's diverse training provider environment.

2.4 At the conclusion of departmental visits, a "report back workshop" was conducted. Officials from 13 departments attended the workshop, during which confirmation was given to the areas of priority needs identified in field visits. The concluding event in the first phase of the consultancy was a meeting with an expert advisory panel, comprised of individuals from government, the ANC Education Desk, and non-governmental organizations (NGOs) to review findings and to discuss options and strategies for addressing capacity building needs in the areas of education planning and management.

2.5 The second phase consisted of developing a model of analysis appropriate to South Africa's complex environment which could accommodate the information gathered in the first phase. Through this model various scenarios were explored to guide the team in determining what skills will be needed, in what quantities, at what level, and how they can best be developed and sustained. This model, and the assumptions which lie behind it, are presented in full in this section, and in a supporting methodological appendix.

2.6 **Report Overview. Section 3** contains an overview of the education sector in South Africa, with attention focused on indicators frequently used to measure inequities in the sector. **Section 4** summarizes the management strengths in existing departments. **Section 5** discusses the areas of planning and management which will need strengthening in a new system. **Section 6** analyzes staffing and training needs in quantitative terms, by management levels and by ministry and regional head offices. **Section 7** analyzes the training provider environment. **Section 8** summarizes prerequisite steps which need to be taken to address training needs in a planned, coordinated manner. **Section 9** summarizes the options considered in shaping a strategy to address training needs, identifies a strategy for approaching the task of creating an effective education sector bureaucracy, and provides an estimate of the costs to implement this strategy.

METHODOLOGY

2.7 Addressing uncertainties through modelling. The field based phase of the consultancy was straightforward: however, the challenge of converting qualitative information on future training needs into quantitative estimates required an analytic methodology that did not exist. The next phase of the consultancy was concerned with projecting this assessment into an uncertain political future, within an unknown structure of the future education system, and attempting to specify how many staff from what levels of the educational bureaucracy in what unspecified regions of the country will need training in which content areas.

2.8 To engage constructively in speculation of this nature requires that analysts specify as many of their assumptions as possible, and link these assumptions to data sets which other analysts can examine, challenge and modify. Insofar as there is no standard "model" for this specific task, the study team took the necessary time to construct such a model.

2.9 **The special consideration of South Africa's situation.** The rationale for taking the time to ground our analysis in a model which could be used by anyone to consider various alternatives to issues of staffing and training in the education bureaucracy is based on the recognition that reform of educational systems is inherently a political quagmire. In many countries the education sector is the largest bureaucracy, in terms of numbers of staff employed and operating budget--thus, it is immediately becomes a battle ground over issues of political appointments, procurement contracts for school construction and textbook writing, publishing and distribution, and numerous other political agendas. The new South Africa will not be exempt from this phenomenon; given the center stage role the educational sector has

played in the struggle for freedom from apartheid there is no reason to believe that the script will be rewritten at this point in time and education's role diminished. The education sector is full of political land mines --ranging across issues of funding equity along racial and ethnic lines, funding priorities within education subsectors, language, the authority of school management committees, the substantial out-of-school population--all of which can frequently be triggered by staffing decisions, and defused by carefully planned and appropriately implemented training, in conjunction with other transformation activities.

2.10 By carefully developing a dynamic model which can be manipulated for purposes of analysis and decision making, the team feels that it has made a contribution to keeping the inevitable dialogue informed and focused on certain factors. The model is felt to be responsive to some of the special considerations of South Africa's context.

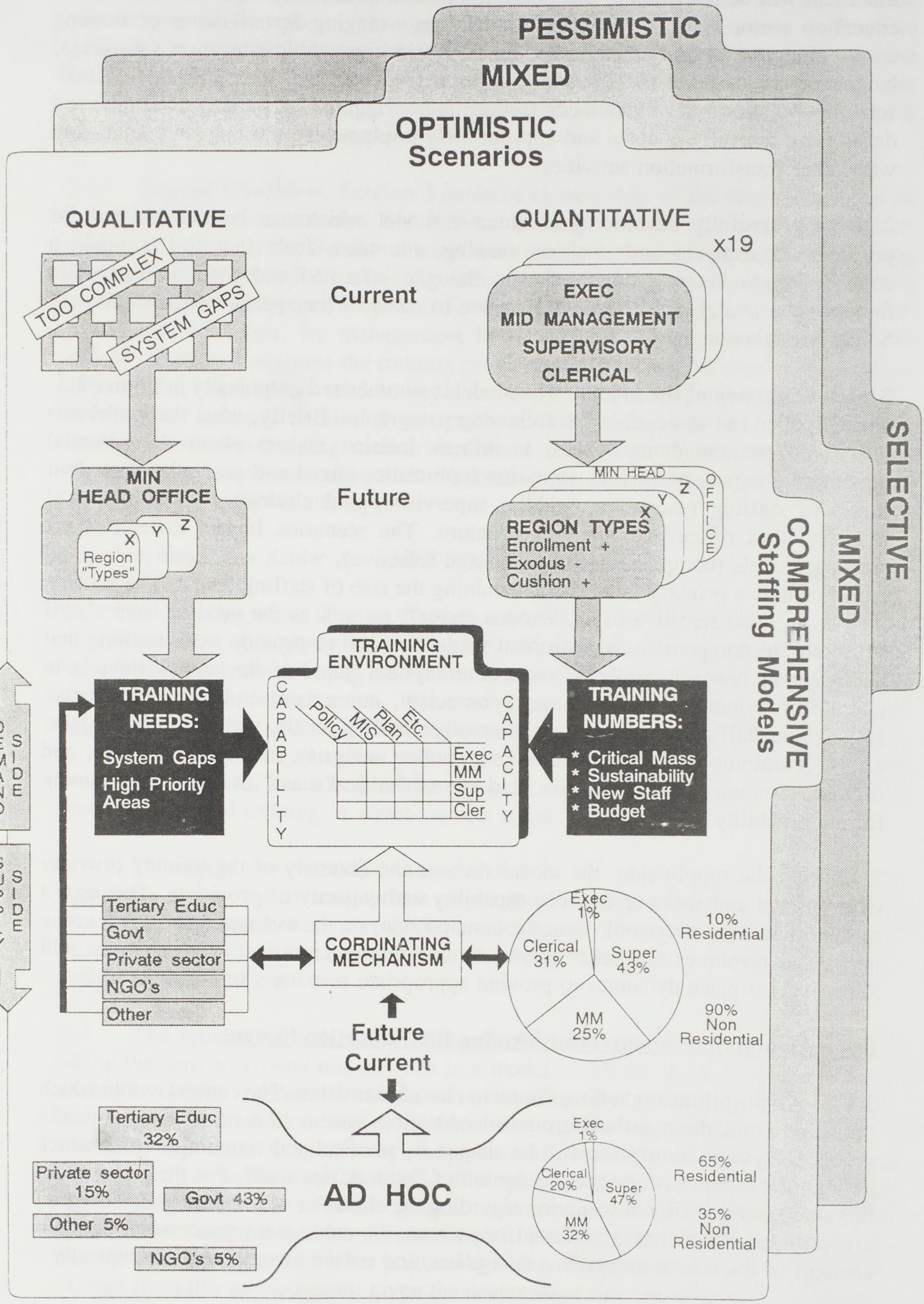
2.11 **Summary of the model.** The model is summarized graphically in **Figure 2.1**, and is spelled out in detail in the following paragraphs. Briefly, what the model sets out to do, on the demand side, is inform decision makers about the potential quantitative impact of various scenarios (optimistic, mixed and pessimistic) on four levels of staffing (executive, middle, supervisory and clerical) at a hypothetical ministry head office and regional structure. The scenarios impact differently on staffing models (comprehensive, mixed and selective), which are sensitive to pupil enrollment as a primary factor in determining the size of staffing levels. The staffing models are also sensitive to an "exodus factor", as well as the need to have a staff "cushion" to compensate for historical inequities, and to provide extra training and management needs in order to overcome "system gaps" if the new system is to operate on principles of democracy, nonracism, nonsexism, and fiscal affirmative action. The staffing models suggest alternative staffing levels, which in turn, suggest a mix of training by functional area (e.g. policy analysis), management levels, and regional structures and head office, and mix of "critical mass" training and "training for sustainability".

2.12 On the supply side, the model reviews the diversity of the training provider environment and seeks to enhance capability and capacity of providers. This aspect of the model is less dynamic than the demand side, on the assumption that if training needs and resources are better known, an aggressive coordinating mechanism will allow market place dynamics to provide appropriate responses to training needs.

Basic Assumptions about Transforming the Education System

2.13 **Assumptions regarding the scenarios of transition.** The context within which transition from the apartheid-grounded education system to a new, democratically grounded system takes place will be shaped by political and economic forces which define the character of the transformation of South Africa itself. For the purposes of this study, three different scenarios regarding the character of national transformation are assumed. Each has a different impact on the subsequent processes by which changes of the education systems take place, and on the assumptions subsequently

FIGURE 2.1


PESSIMISTIC
MIXED
OPTIMISTIC
Scenarios
QUALITATIVE
QUANTITATIVE
TOO COMPLEX
SYSTEM GAPS
Current
x19
EXEC
MID MANAGEMENT
SUPERVISORY
CLERICAL
MIN
HEAD OFFICE
X
Y
Z
Region "Types"
Future
MIN HEAD OFFICE
REGION TYPES
Enrollment +
Exodus -
Cushion +
SELECTIVE
MIXED
COMPREHENSIVE
Staffing Models
DEMAND SIDE
SUPPLY SIDE
TRAINING NEEDS:
System Gaps
High Priority Areas
TRAINING ENVIRONMENT
CAPABILITY
CAPACITY
Policy
MIS
Plan
Etc.
Exec
MM
Sup
Cler
TRAINING NUMBERS:
* Critical Mass
* Sustainability
* New Staff
* Budget
Tertiary Educ
Govt
Private sector
NGO's
Other
CORDINATING MECHANISM
Exec 1%
Clerical 31%
Super 43%
MM 25%
10% Residential
90% Non Residential
Future
Current
Tertiary Educ 32%
Private sector 15%
Govt 43%
Other 5%
NGO's 5%
AD HOC
Exec 1%
Clerical 20%
Super 47%
MM 32%
65% Residential
35% Non Residential

used to guide the development of options and strategies for addressing the planning and management training needs of the new educational system.

2.14 **Elements of the political-economic scenarios and the education system impact.** The elements which shape each of the scenarios are the following:

a. the nature of the political transition process, in terms of the degree of peacefulness or conflict which dominates it;

b. the nature of the economy of the country, based on the nature of the political transition process, in terms of retreat from or further decline into the current recession;

c. the response of foreign donors with education sector interests, based on (a) and (b), in terms of the degree of caution exercised to fund education sector needs;

2.15 **The optimistic scenario.** In the optimistic scenario, the nature of the political transition process is essentially peaceful, characterized by smooth progress based on skilful, sincere negotiations leading to a rather quick transition from the current political structure, through an interim phase, to a new democratic dispensation. This has a positive impact on the nature of the economy; there is steady, moderate recovery from the current recession, creating a willingness and capacity for substantial budgetary commitment to the education sector. This creates a climate of enthusiasm among international donors interested in supporting education sector reforms. The resources of the education sector, including domestic and foreign inputs, support considerable capital investment and major increases in operational costs.

2.16 **The pessimistic scenario.** In the pessimistic scenario, the nature of the political transition process is violent and conflict driven. Progress is slow and uneven, characterized by a high degree of distrust among key groups. Uncertainty about the political future dominates all aspects of life. Hardest hit is the economy, which accelerates a tailspin towards a bleak future. Foreign donors maintain a "morally supportive" presence, and token support for education sector changes.

2.17 **The "mixed" scenario.** This scenario is characterized by elements of both optimism and pessimism. At times the political process promises peace; at times it breaks down into violent spasms and short cycles of recriminations, followed by cooling off periods. The transition to a new dispensation takes places under clouds of uncertainty. This is reflected by an economy that excites no one and generates meager resources for risk-taking and growth. Foreign donors carefully select targets of opportunity, preferring activities which are simple and have short implementation periods.

2.18 **Assumptions and elements of the staffing models.** In ways that are discussed in detail further below, the scenarios have differing impacts on certain essential elements of the education system which we have linked together in **staffing models**. These elements are:

a. the rate of enrollment growth within the education sector, by racial groups and age cohorts;

b. the rate of change in the size of the education bureaucracy, on a regional basis, based on pupil:staff ratios;

c. the composition and commitment of the education bureaucracy on a regional basis, as reflected in a "cushion" factor and an "exodus" factor;

d. the size of the education sector budget, and therefore its capacity to support changes through training commitments;

2.19 **The staffing models.** The results of interaction among these elements in the three scenarios lead to three different staffing models, each of which affects training demands. The **comprehensive** staffing change model is based on the optimistic scenario, and anticipates substantial changes in staffing in all "regional types" and ministry head office, at all management levels. The **mixed** staffing change model is based on the mixed scenario, and anticipates fewer staffing changes than the comprehensive model, but in most regional types and levels. The **selective** staffing change model is based on the pessimistic scenario, and anticipates changes mostly in urban black areas. In the paragraphs below the general dynamics of these models are described. The methodological appendix explains exactly how these assumptions are expressed in terms of quantitative impact; that is, how staffing size is calculated, how the exodus and cushion factors vary under the different models, what specific budget assumptions are made.

2.20 **The comprehensive model.** In the comprehensive model, it is assumed that pupil enrollment will grow according to growth projections used in APEX, another education modelling tool used in South Africa, and that a significant percentage of the out-of-school population will return, drawn back by better schools and promises of jobs in a better economy. As a consequence, the size of the bureaucracy, based on pupil:staff ratios will also grow significantly, in all levels and regions. There is likely to be high turnover in all levels of management as followers of the "old order" seek new opportunities in the private sector, or other, less threatening government departments. As a consequence, there will be comprehensive staffing changes in all levels and all regions. The new government will be able to accommodate a wide range of staffing pressures. With growth in staffing will come increased demand for training, at all levels, in all regions, and in all functional areas. The climate within the educational bureaucracy will be one of catalytic innovation, bold leadership, and close partnership with the private sector and non-governmental organizations. Because of an optimistic economy, there will be resources to support growth in the education budget, for both capital investments and operating costs, including the development of a "staffing cushion" in former black departments.

2.21 **The selective model.** In this model it is assumed that enrollment growth will be moderate, and the out-of-school population will stay there. "White flight" will set in, for those who have options, and white enrollments in public schools stagnate

either because of emigration or shifts to private schools, while black enrollments will fail to grow at predicted rates, due to the poor economy and continuing poor conditions in many schools. There will be limited growth in staffing, mainly from "catching up" caused by historical inequities, and the "exodus factor". As a consequence, the new government will be very selective in new appointments. The bureaucracy will reflect the distrust and tensions of the larger political environment, and there will be wide scale loss of black and white "moderate" education leaders. The clerical ranks of the education bureaucracy, having no options to leave given the poor economy, will use the "tools of bureaucracy" to oppose changes. Training needs will remain high in the former disadvantaged departments, but training resources will be extremely limited. The resources of the education sector will be under sharp pressures from other sectors of the new civil society, leaving little for capital investments, or growth in operational costs. The need for a staffing cushion will exist, but budget limitations will make it unlikely.

2.22 **The mixed model.** Enrollments will grow at a moderate, uncertain pace; the out-of-school population will stay out of school in rural areas, since schools there will receive less new support than their urban counterparts, and the out-of-school youth in urban area will begin returning, but at a lower rate than in the optimistic scenario. Staff changes will, as in the pessimistic model, result mainly from adjustment to previous understaffing, and the exodus factor--white staff leaving. The new government's opportunities to make appointments will need to be mixed, in order to accommodate uncertain alliances. The educational bureaucracy will be characterized by occasional "turf battles", as political favorites seek to enlarge their scope. Training demands will be the same as in the selective model. While there will be some progress in improving conditions in black urban schools, rural areas will continue to lag far behind. The education budget will show modest growth; there will be few pockets of innovation and growth, chosen primarily for political reasons.

Assumptions about the Regional Structure and Functions.

2.23 In addition to the general assumptions expressed in the scenarios and staffing models, several other important sets of assumptions are incorporated in the analysis. These concern issues such as (a) the structure of the educational system (including the areas of responsibilities between the head office of a central ministry and regional offices, (b) differing characteristics of a regional structure, (c) the use of a pupil:staff ratio for guiding staffing decision, and (d) use of four levels of management to view staffing needs.

2.24 **General assumptions about the nature of the educational system under a new dispensation.** Much has been written and discussed about the new educational system, and the assumptions concerning its character. Perhaps the best summary of these matters has been expressed by Buckland and Hofmeyr (1992), and we will rely on this statement for our purposes:

> "[We] assume the existence of a **strong unitary state** with considerable devolution of authority to **regional governments**; a commitment to a nonracial, nondiscriminatory **single education system**; a commitment to

democratic participation and a vigorous civil society involving a balance between inward industrialization and export-led growth and redistribution of wealth spearheaded by education and training; a **common core curriculum** providing for solid **general education** designed to equip pupils with skills [and] abilities necessary to enable their effective participation in society and to benefit from vocational education and training; a commitment to a **vocational education and training system** which is closely articulated with the education system, which involves significant participation of the state, employers and unions and which provides for both carefully monitored demand-led training programmes and strategically selected supply-led training initiatives; and acceptance by the state of the need to establish an open, accessible and **accountable management system** in all public authorities supported by active and coherent **management training.** (Buckland and Hofmeyr: 1992)

2.25 **Assumptions about structure.** Most observers of the transition to a new South Africa agree that the new educational system will have a central, unified Ministry of Education responsible for policy development, financing and monitoring of educational system performance, and a regional structure responsible for implementing education policy. Proposals for the number of regions range from six to ten (ANC:1992; DBSA:1992; Moulder:1991). Within each region, a sub-regional or district structure may be desirable, as is currently the case in some of the existing departments (Buckland, Hofmeyr:1992; NEPI (Governance) :1992; C.van Zyl:1991). For the purposes of estimating training demand, we assume more rather than fewer regions, and, in the short run, make no assumptions about sub-regional structures.

2.26 **Assumptions about regional "types".** Rather than specifying probable regions, we have assumed three types of regions, based upon levels of education demand and management needs in each type of region. Training needs will differ within the three different types of regions because of the different levels of trained personnel in the current departments. In order to estimate future staffing and training needs, existing departments have been allocated to these regional types. However, this allocation has been done merely for calculation purposes, and should not be construed as suggestive of future regional structures.

a. Type X: <u>High needs, mostly rural population</u> (e.g. Northern Transvaal or Transkei); high unmet demand for educational services (primary, secondary, and adult); high backlog of demand for classrooms, teachers, and learning materials; low qualifications among the existing teacher population; high need for strengthening management capacity and capability; complex current departmental situation, that is many departments (e.g., House of Assembly, House of Representatives and/or Delegates; DET (Dept. of Education and Training); one or more self-governing territories' (SGT) education departments; one or more TBVC departments) currently operating in the region with little cooperation); relatively few training providers serving this area.

b. Type Y: <u>Mixed needs/mixed urban and rural</u> (e.g Natal, PWV (Pretoria-Witwatersrand-Vereeniging)); some areas with high unmet demand for services and backlogs, and other areas with relatively well

met needs; imbalance in terms of management capacity-- some current departments strong, some weak; less inter-departmental complexity than Type X, and some history of interdepartmental cooperation; rich training provider environment.

c. Type Z: Relatively low level of unmet demand for educational services, and relatively low population density (e.g. Cape; OFS); areas of unmet demand are relatively few; good inventory of teacher resources; relatively low demand for strengthening management capacity and capability (i.e. present management systems good); less complex departmental situation than Type Y; reasonable training provider environment.

d. In calculating staffing and training needs, the existing departments were allocated to the above regional types as follows:

TYPE X: Transkei, Bophuthatswana, Venda, Ciskei, Gazankulu, KaNgwane, Lebowa;

TYPE Y: Delegates, DET (Natal and Transvaal), H/Assembly (Natal and Transvaal), KwaZulu, KwaNdebele, QwaQwa;

TYPE Z: DET (Cape and Orange Free State), H/Assembly (Cape and Orange Free State), Representatives[1].

2.27 **Assumptions about Ministry Head Office.** As indicated earlier, a certain level of agreement exists about the structure and functions of a unified system of education, and the need for a head office which is responsible for overall education policy. Some observers suggest that the creation of the Department of National Education (DNE) was an important step in that direction (C.van Zyl:1991). For the purpose of this study, we have assumed that a future head office is likely to have responsibilities similar to those held by the DNE and the head offices of the existing House of Assembly education departments and the DET, in addition to new functions. The assessment of staffing and training needs which follow are made with this construct in mind. This is not to imply that present staff in these structures be shifted into this head office. For obvious historical reasons that would not be politically desirable; the relationship to present staffing is only in terms of likely staffing numbers and training needs.

2.28 **Assumptions about levels of management.** To facilitate estimating staffing and training needs, current positions in the professional and administrative divisions of departments of education have been grouped into four levels of management: executive, middle management, supervisory, and clerical, as described in detail in Section 3. This structure is generally universal; it assumes that changes in scopes of

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[1] See Methodology Appendix Note 1.

responsibility vary with level, as do the general functions and characteristics of effective management.

2.29 **Assumptions about numbers of staff.** The likely number of "head office" staff (by management level) in each type of region is assumed to reflect changes based on needs inherent in the regional types, and changes reflecting the political-economic scenarios. Assumptions regarding changes in the number of staff needed are guided by a presumed relationship between the numbers of pupils enrolled in a regional type and the number of head office staff, by levels of management, needed to serve this population. Enrollment, as suggested earlier, may vary with political-economic conditions. The number of needed staff, as a function of the difference between how many there are and how many will be needed based upon enrollment-based needs, may also vary according to political-economic conditions since these conditions will influence the number that may wish to stay or leave.

Assumptions Regarding Staffing Needs:

2.30 **Current head office staffing.** The assumptions discussed above provide a framework for considering the staffing needs of a new ministry of education. Data on current staffing provide a starting point for analyzing staffing and training needs in the new system. **Table 2.1** indicates the present staffing at departmental head offices, as reported to the Study Team. The positions at each management level have been combined in the manner indicated in Section 3. Departments are grouped by present political arrangements and shown in the order of size of their head office staff, from smallest to largest.

2.31 **Creating the regional staffing levels. Table 2.2** serves to combine the existing departments (less DNE and the head office personnel of DET and Assembly) into the three regional types indicated above. **This provides an initial basis of staffing by management levels at the regional level against which future projections are made.** The current regional office staff of the DET have been allocated to Region Types Y and Z by putting DET (Transvaal and Natal) into Type Y and DET (OFS and Cape) into Type Z, given the nature of these regional types.

2.32 **Staffing in the Ministry of Education head office.** In addition to determining the needed staffing levels at the regional offices, consideration is given to the staffing and training needs of the head office of a new, unified Ministry of Education. The Study Team has assumed a reasonable starting point in staffing to be the numbers represented by the combined present staffing of the DNE, and Head Offices of the House of Assembly and DET.[2]

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[2] See Methodology Appendix Note 2.

TABLE 2.1: Current Management Personnel by Department, Staffing Category and Gender

DEPARTMENT	STAFFING CATEGORY																TOTALS			
	EXECUTIVE				MIDDLE				SUPERVISORY				CLERICAL							
	M	F	V	TOTAL	M	F	V	TOTAL	M	F	V	TOTAL	M	F	V	TOTAL	M	F	V	TOTAL
DNE	4	0	1	5	26	0	16	42	2	5	0	7	3	8	0	11	35	13	17	65
DELEGATES	3	0	0	3	45	4	0	49	78	22	13	113	55	31	3	89	181	57	16	254
REPESENTATIVES	2	0	0	2	155	7	0	162	227	84	0	311	152	55	0	207	536	146	0	682
TBVCs	17	0	1	18	122	29	12	163	355	108	28	491	225	361	45	631	719	498	86	1303
Transkei	9	0	0	9	64	13	8	85	111	50	11	172	98	195	35	328	282	258	54	594
Bophuthatswana	2	0	0	2	35	15	2	52	165	46	12	223	58	34	6	98	260	95	20	375
Venda	2	0	0	2	12	0	2	14	44	6	5	55	32	34	4	70	90	40	11	141
Ciskei	4	0	1	5	11	1	0	12	35	6	0	41	37	98	0	135	87	105	1	193
SGTs	4	0	3	7	124	13	50	187	431	181	129	741	520	342	12	874	1079	536	194	1809
Gazankulu	1	0	0	1	26	2	0	28	104	15	0	119	308	196	0	504	439	213	0	652
KaNgwane	0	0	0	0	8	0	6	14	39	7	3	49	26	19	2	47	73	26	11	110
KwaZulu	2	0	3	5	52	6	39	97	146	105	100	351	41	80	7	128	241	191	149	581
Lebowa	1	0	0	1	17	1	0	18	53	11	2	66	77	17	0	94	148	29	2	179
QwaQwa	0	0	0	0	11	0	2	13	32	15	17	64	22	10	1	33	65	25	20	110
KwaNdebele	0	0	0	0	10	4	3	17	57	28	7	92	46	20	2	68	113	52	12	177
ASSEMBLY	17	0	0	17	351	18	3	372	709	530	34	1273	197	1208	81	1486	1274	1756	118	3148
Head Office	7	0	0	7	74	6	0	80	106	157	0	263	39	246	0	285	226	409	0	635
Cape	3	0	0	3	74	1	3	78	120	86	10	216	38	232	19	289	235	319	32	586
Natal	2	0	0	2	35	1	0	36	50	33	6	89	26	145	2	173	113	179	8	300
OFS	2	0	0	2	32	1	0	33	35	28	0	63	22	78	0	100	91	107	0	198
Transvaal	3	0	0	3	136	9	0	145	398	226	18	642	72	507	60	639	609	742	78	1429
DET	18	0	0	18	548	20	20	588	1218	681	170	2069	1170	1104	11	2285	2954	1805	201	4960
TOTAL	65	0	5	70	1371	91	101	1563	3020	1611	374	5005	2322	3109	152	5583	6778	4811	632	12221

NOTES:
M = Males
F = Females
V = Vacancies

See Section 3 for explanation of Staffing Categories

	TABLE 2.2: Management Personnel by Regional Types and Ministry Head Office						
	DEPARTMENTS BY REGIONAL TYPE	ENROLMENT	STAFFING CATEGORY				TOTAL
			EXECUTIVE	MIDDLE	SUPERVISORY	CLERICAL	
			CSL	CSL	CSL	CSL	CSL
	Bophuthatswana	573664	2	52	223	98	375
1	Ciskei	287453	5	12	41	135	193
	Gazankulu	318667	1	28	119	504	652
	KaNgwane	226809	0	14	49	47	110
	Lebowa	929043	1	18	66	94	179
2	Transkei	1161664	9	85	172	328	594
	Venda	231830	2	14	55	70	141
	TYPE X TOTAL	3729130	20	223	725	1276	2244
	Delegates	233101	3	49	113	89	254
	DET (Type Y)	1483502	7	303	1078	1221	2609
	KwaNdebele	141126	0	17	92	68	177
	KwaZulu	1540852	5	97	351	128	581
	Natal (Assembly)	120973	2	36	89	173	300
	QwaQwa	106996	0	13	64	33	110
	Transvaal (Assembly)	605932	3	145	642	639	1429
	TYPE Y TOTAL	4232482	20	660	2429	2351	5460
	Cape (Assembly)	249994	3	78	216	289	586
	DET (Type Z)	765838	4	156	557	630	1347
	OFS (Assembly)	82335	2	33	63	100	198
	Representatives	841387	2	162	311	207	682
	TYPE Z TOTAL	1939554	11	429	1147	1226	2813
	DNE		5	42	7	11	65
	DET		7	129	434	434	1004
	ASSEMBLY		7	80	263	285	635
	MINISTRY HEAD OFFICE		19	251	704	730	1704
	GRAND TOTAL	9901165	70	1563	5005	5583	12221

NOTES: Enrolment figures are based on 1991 enrolment, except as noted below:

1 Ciskei figure calculated on 1989 enrolment plus 7% estimated annual growth

2 Transkei figure calculated on 1988 enrolment plus 7% estimated annual growth

CSL = Current Staffing Level

2.33 **Pupil:Professional Staff Ratio (PPSR).** The figures in Table 2.2 suggest where staffing of regional offices might stand, at the start of a new dispensation, based upon current staffing. But that may not be a reasonable starting point if the questions are "what is really needed" and "what is a fair distribution of staff resources?" A reasonable starting point to determine the number of regional and ministry head office staff needed for the new Ministry of Education is a ratio that reflects a reasonable relationship of head office staff to pupil enrollment. Conventional wisdom is that the education bureaucracy in South Africa is top heavy because of the duplication created by the apartheid system. While there may be a certain degree of truth to this sentiment, the realities suggest that many departments are understaffed. What is a reasonable level of staffing in the South African context? For the purposes of this study, the Study Team has used the House of Delegates pupils: professional staff ratios (PPSR) as a reasonable starting point, with respect to the non-clerical categories of staff. The choice of the House of Delegates is admittedly arbitrary, but it is based on two considerations: (a) it is considered by most observers to be a well managed department, with pupil performance (as measured by matriculation exam results) comparable to the better resourced House of Assembly, and (b) the fact that it has a higher ratio than any of the black departments, but less than the House of Assembly departments. The PPSR for departments, based on actual positions, less vacancies, is shown in **Table 2.3**.

Table 2.3

Pupils:Professional Staff Ratio
(based on current staffing less vacancies)

Departments	Pupils:Executive	Pupils:Middle Management	Pupils: Supervisory
SGTs (combined)	466,213	17,471	4,404
TBVC (combined)	125,256	13,831	5,737
DET	124,963	3,824	1,109
Representatives	420,692	5,194	2,705
Delegates	**77,700**	**4,757**	**2,062**
Assembly (combined)	62,397	2,847	832

Source: Based on data collected in this study.

2.34 **Pupil:Clerical Staff Ratio (PCSR).** With respect to the clerical staff, the Study Team has used the DET pupil:clerical staff ratio. Again, this is admittedly arbitrary, but reasonable in that many observers would agree that DET is reasonably staffed at the clerk level, at the head and regional offices, while the House of

Assembly departments tend to be somewhat over staffed and other departments are under staffed. Data supplied to the Study Team by these departments support these observations.

Table 2.4

Pupil:Clerical Staff Ratio
(based on current staffing less vacancies)

Departments	Ratio: Pupils/Clerical Staff
Representatives	4,065
SGTs (combined)	3,734
TBVC (combined)	3,573
Delegates	2,619
DET	**984**
Assembly (combined)	713

Source: Based on data collected in this study.

2.35 **Other factors affecting staffing needs.** It is the Study Team's contention that in addition to "standard" pupil:staff ratios, other factors need to be considered which affect estimates of staff and training needs, given the special context of South Africa's education sector. These factors include: (a) forces which influence enrollment growth; (b) the need for a "cushion" in staffing in order to cope with changes, manage day-to-day affairs and receive training in high priority areas; and (c) recognition of an "exodus" factor to account for substantial staff changes, largely along racial lines, when there is a change in political control in South Africa.

2.36 Each of these factors is subject to the influences which characterize each scenario. Following is an explanation of each factor and how it varies with each scenario to produce an adjustment in the estimate of staffing needs, on which subsequent training needs are based.

2.37 **The enrollment growth factor.** The projected growth in enrollment was calculated by using an education policy analysis model, known as APEX, which is used by many education analysts in South Africa. Using the APEX model, enrollment for 1997 was projected. This projected enrollment was allocated to the three regional types, and adjusted to reflect conditions which characterize each of the three scenarios. The details of this process are provided in the Methodology Appendix, Note 3. Briefly, to estimate enrollment under the optimistic scenario we added 1.4 million of the out-of-school population to the assumptions of enrollment growth. For

the pessimistic scenario, we excluded the out-of-school youth and decreased the rate of growth for black and white students at the same rate. Under the mixed scenario, we decreased the urban black and white rate of enrollment growth slightly less than in the pessimistic model, but left rural black rate of enrollment growth the same as in the pessimistic scenario. **Table 2.5a** indicates the projected enrollment for 1997 based on these assumptions, as well as the staffing this enrollment would require, based on the pupil:staff rations discussed earlier.

2.38 **The "cushion" factor.** Specific factors of South Africa's special context suggest that the demands on management in all regions and at ministerial head office will be such that an extra "cushion" needs to be reflected in the numbers on which training demand are estimated. The considerations included in the model which support the" cushion" factor are:

a. the anticipated growth rate in enrollments in resulting from population growth, a higher school "survival" rate, an expansion of enrollments in cohorts in the black pupil population as a result of school construction, an anticipated better learning environment, and enhanced legitimacy of the system;

b. additional management pressures created by infusion of funds for school construction, learning materials development projects, teacher training programs and other "quality of education" enhancement activities;

c. the need to provide substantial amounts of training to staff in new areas (the system gaps identified in Section 5) and to staff who have been "training starved" in other areas for years, for various reasons.

d. the need to accommodate a higher proportion of new staff (for obvious political reasons) than might ordinarily be the case under normal growth and attrition replacement.

e. budget resources to accommodate the above.

2.39 **Creating the cushion.** The cushion is created by **accelerating the expansion of staffing based on enrollment growth**. In other words, if enrollment projections suggest an expansion of staff by 100 over a five year period, the cushion is built by expanding to 100 at a rate faster than enrollment growth. This allows management to anticipate and prepare for change, through training and other related actions, **before** enrollment pressures arrive.

2.40 **Differences in regional cushions.** The regional types have differences in management capability. Therefore, regions with less capability, such as Regional Type X, need a "bigger cushion" than Regional Type Z if they are to cope successfully with the factors identified above. This need is handled as follows: in Region Type X, where the need to strengthen management capability is the highest, 40% of the projected staffing growth is introduced immediately, and the remaining

Distribution of 1.4 million Black "drop-ins"				TABLE 2.5a: OPTIMISTIC SCENARIO FOR 1997 STAFFING AND ENROLMENT						
Department	Base Enrolment	% of all Black Department	Drop-ins/ Department	DEPARTMENTS BY REGIONAL TYPE	ENROLMENT	STAFFING CATEGORY EXECUTIVE TSN	MIDDLE TSN	SUPERVISORY TSN	CLERICAL TSN	TOTAL TSN
Bophuthatswana	727535	7.4%	103397	Bophuthatswana	830932	11	175	403	844	1433
Ciskei	364555	3.7%	51810	Ciskei	416365	5	88	202	423	718
Gazankulu	404142	4.1%	57436	Gazankulu	461578	6	97	224	469	796
KaNgwane	287645	2.9%	40880	KaNgwane	328525	4	69	159	334	566
Lebowa	1178236	12.0%	167450	Lebowa	1345686	17	283	652	1368	2320
Transkei	1473252	15.0%	209378	Transkei	1682630	22	354	816	1710	2901
Venda	294013	3.0%	41785	Venda	335798	4	71	163	341	579
				TYPE X TOTAL	5401514	70	1135	2618	5489	9313
				Delegates	244106	3	51	118	248	421
DET (Type Y)	1881415	19.1%	267386	DET (Type Y)	2148801	28	452	1042	2184	3705
KwaNdebele	178980	1.8%	25437	KwaNdebele	204417	3	43	99	208	352
KwaZulu	1954148	19.8%	277722	KwaZulu	2231870	29	469	1082	2268	3848
				Natal (Assembly)	125619	2	26	61	128	217
QwaQwa	135695	1.4%	19285	QwaQwa	154980	2	33	75	158	267
				Transvaal (Assembly)	629202	8	132	305	639	1085
				TYPE Y TOTAL	5738995	74	1206	2782	5832	9895
				Cape (Assembly)	259595	3	55	126	264	448
DET (Type Z)	971255	9.9%	138034	DET (Type Z)	1109289	14	233	538	1127	1913
				OFS (Assembly)	85497	1	18	41	87	147
				Representatives	907417	12	191	440	922	1564
				TYPE Z TOTAL	2361798	30	496	1145	2400	4072
Total Black Depts.	9850871	100.0%	1400000	REGIONAL SUBTOTAL	13502307	174	2838	6545	13722	23279
				MINISTRY HEAD OFFICE *		70	568	982	1372	2991
				GRAND TOTAL		243	3406	7527	15094	26271

NOTES: * See Note 2 in Methodology Appendix

TSN = Targeted Staffing Needs

PUPIL PER STAFF and PUPIL PER CLERICAL STAFF RATIOS

PPSR for Executives =	77700
PPSR for Middle Management =	4757
PPSR for Supervisory =	2063
PCSR for Clerical =	984

60 % spread evenly over the next four years. In Region Type Y, where management capability is mixed, 30% of the projected staffing needs are introduced immediately, and the remainder spread evenly over the next four years. In Region Type Z, where management capability needs are lowest, no cushion is considered and the projected staffing needs are introduced on an even basis of 20% a year over the five year period considered in this study.

2.41 **The scenario impact on the regional cushions: the "anti-cushion".** The scenarios are assumed to have differing impacts on the regions. Basically, the optimistic scenario enables the cushion factor to be put into effect fully, while the pessimistic and mixed scenarios negate, in varying degrees the intent of the cushion. In effect, in the pessimistic and mixed scenarios, the poor state of the economy not only eliminates the possibility of creating a cushion, but acts as an "anti-cushion" by preventing staffing to expand to the standards assumed earlier. The assumptions are explained in detail in the Methodology Appendix (Note 4) along with **Tables 6.9a-o** which show the impact of the scenario impacts on the staffing models, by levels of employees and regions.

2.42 **Cushion effect on ministry head office.** The same argument of considering an accelerated rate of expanding management staffing can also be made for the head office of the new ministry. The ministry will be under immense pressures from a new government and the educational community for creating and implementing new policies and monitoring their impact. It is assumed that ministry head office staffing will not be influenced by various scenarios, due to greater influence over budgetary decision making and the pressures of creating a new educational order in South Africa. In effect, staffing of the ministry head office is assumed to benefit by the cushion effect regardless of economic conditions.

2.43 **The exodus factor.** The third general factor which may affect staffing needs (the other two being enrollment and the cushion effect) and, consequently, the estimate of demand for training, is the response of the education bureaucracy's employees to the new dispensation, and the impact of the various scenarios to the response. This is termed "the exodus factor" for obvious reasons. In general, it is assumed that many of the white staff who have been employed in black departments, notably DET and the House of Representatives, may prefer not to stay under a new dispensation. Some may also wish to leave the present House of Assembly departments when these departments no longer exist. It is also generally assumed that the character of the political change process and the general economy will have an impact on who will have the opportunity to make changes. When the economy is best, the staff at the lower levels will have more opportunity to more to the private sector or elsewhere. When the economy is bad, these opportunities will evaporate, and people in the lower management levels will feel the need to hang on to their jobs, even if they do not support changes in the education system. However, staff at the upper levels will have more opportunity to leave, even when the economy is bad, and will be more inclined to do so if there is a tense political climate, since that will impact on the bureaucracy as well. These assumptions are spelled out more fully in the Methodology Appendix (Note 5). The impact of the assumptions are shown in Tables 6.10a-l in the Methodology Appendix. As can be seen in these tables, and is

further discussed in Section 6 below, the exodus factor, combined with the need to "catch up" in terms of historical understaffing in certain departments, contributes to a staffing gap of significant proportions.

2.44 **The significance of the 1993 staffing gaps.** Much has been written and talked about concerning the need for more teachers, but, until this study, there has been little analysis and informed discussion about the increased management needs to design, implement and monitor a new educational dispensation. These staffing gaps represent important opportunities for a new government to introduce "new blood", new ideas, and new educational values into the educational bureaucracy of the nation. It is the Study Team's recommendation that consideration be given to a policy in which approximately 25% of the gap be filled by promotion from within the current ranks of education system employees, and 75% be filled by recruitment from NGOs, universities, the private sector and other sources. Further, the Study Team recommends that all efforts to fill these gaps, whether from within or "new hires" should be guided by affirmative action principles. **Table 2.1** showed the current dismal state of affairs regarding female staffing in departments. Anecdotal evidence collected during the study suggests that there are many women in the education sector who have the qualifications, experience and leadership skills to assume responsible positions at all levels, but access to such positions is routinely denied. Staffing data by racial groups in the departments is not available, but other studies have shown that the appointment of non-whites at executive, middle management and supervisory levels in government, generally, is very limited. In the present TBVC and SGT territories, a very high percentage of all head office positions are held by blacks. In the House of Delegates, few, if any, non-Indians occupy management positions, while in the House of Representatives, many of the top positions are filled by whites. If nonracist and nonsexist principles are to be followed under a new dispensation, these staffing situations must change, and government decisions in filling the gaps offer a clear opportunity for doing so. These gaps have a "down side" as well. When the gaps are large, or concentrated in specific levels and regions, the demands on training will be even greater, as offices struggle to orient large numbers of staff to procedures. Large gaps suggest instability, and confusion, both of which will be experienced as a result of the changes brought about by a new dispensation.

Assumptions Regarding Training Needs.

2.45 **Assumptions concerning the estimate of training needs.** The paragraphs above have served to establish a baseline of staffing projections on which to estimate training needs. In the field -based portion of the study, the highest priority training needs identified fell into three main categories: system gap needs, service delivery needs, and "other", which has two subcategories, administrative and professional. The administrative subcategory includes project cycle management, basic management skills, performance appraisal, and procurement. The professional subcategory includes curriculum research and development, education research, managing supervisory and inspection functions, and teacher development. In order to estimate how much training is likely to be needed in these areas, at each level of management and in each regional area, certain assumptions are made.

a. It is assumed that within each type of region, the demand for training within the high priority categories summarized above will vary considerably, based in large part on the extent to which the category is a "system gap", as opposed to a functional area present in the current structure. If the functional area is in a system gap category, it is assumed that a higher percentage of staff will need some training in the area than the percentage in the other areas. The basis for this assumption is that by virtue of being a system gap, it is assumed that there is little or no competence present within the system to serve as the basis for informal training or mentoring, which is the most widely used approach to training of head office staff in the current education sector.

b. It is assumed that an **initial training approach** to be followed in addressing high priority training needs in the regional offices and the central ministry will be to focus on the development of a critical mass of officials in key functional areas. This assumption is based on experiences and advice followed in other countries where there has been rapid, radical transformation with an emphasis on decentralization and the introduction of educational innovations, and limited training resources (Prawda: 1992; Rondinelli et al: 1989 and 1990). By focusing training resources on a critical mass, there is a higher probability that training will be closely tied to efforts to initiate changes, and can be modified to meet demands as they emerge. Such training generally uses an action-training methodology, in order to maximize immediate application and testing of new operating procedures before training of large numbers of staff is undertaken.

c. It is assumed that in executive, middle management and supervisory levels, persons in positions regarded as professional (as opposed to administrative) lack education-based qualifications for these positions. For example, it is estimated that there are approximately 700 education planners in South Africa. (Central Statistical Services. Manpower Survey 1989. Occupational Information. Report 02-01-01 (1989)) During the course of this study, the Team did not meet anyone with education-based qualifications in education planning. In general, staff in these positions gained what qualifications they have on the basis on experience and limited specialized training, such as that provided by RIEP. The impact of this assumption is that an in-depth analysis of qualifications will reveal little useful information, and therefore the Study Team made no effort to seek data on professional qualifications of head office staff. This position was confirmed through discussions with informed staff who prepare statistical reports for the DNE and are familiar with survey returns from departments regarding such matters.

d. In contrast to the above, it is assumed that staff at middle management level and below who hold positions regarded as administrative have education-based qualifications for these positions, in fields where such

education programs exits. For example, in finance and personnel administration, the Team found that persons holding positions in these areas had appropriate educational qualification. The importance of this assumption is that training designers may safely assume a basic understanding of administrative fields such as finance and personnel administration when designing advanced training for personnel in these areas, as in the case of certain aspects of management information systems or procurement systems.

e. It is assumed that the primary purpose of training is to meet immediate organizational performance objectives, rather than to enhance individual qualifications through degree programs.

2.46 **Estimate of training need impact.** Since the actual structure and staff requirements of regional offices is unknown at this time, there is no precise way to estimate how responsibilities for a given functional area, such as monitoring and evaluation, will be assigned to individuals. Consequently, arbitrary assumptions regarding the need for training among staff at a given level were made. In order to operationalize the first assumption above, the Study Team reviewed the training needs by functional areas, by management level, and by regional type and ministry head office, and assigned an "impact assessment" value to each functional area of training need, as shown in **Tables 6.11a-d** of the Methodology Appendix. The notion of **impact assessment concerns how broadly the need for training exists at a given management level; that is, what percent of the employees at a given level are likely to need training in this area in order for the goal of training--improved organizational performance in this area of activity--to be felt.** This provides assurance that enough staff will have sufficient knowledge in the area, regardless of how responsibilities are assigned, to enable functional tasks to be planned, implemented and monitored. **Tables 6.12a-e** indicate the results of this assessment for each functional area of training need under the comprehensive staffing model, in each regional area and ministry head office, by levels of management. **Tables 6.13a-e and 6.14a-e** cover the mixed and selective staffing models respectively.

2.47 **A strategy of critical mass training followed by sustainability training.** The numbers shown in these tables cover a range of training needs to be addressed during an arbitrarily suggested period from the present to 1997. This is not to suggest that all or even most high priority training should be completed by 1997. It serves to set a target which helps to plan and program training strategies within a time frame that is sensitive to a number of factors. The basic strategy suggested by the Study Team is to initiate training around a **critical mass of persons** in each functional area, and covering all necessary levels in each region and the ministry head office. An annual cycle of training aimed at **sustaining and spreading** changes follows critical mass training. The **annual phase of training for sustainability** needs to be at a rate that is an acceptable balance between the pressures of need and resource availability--between the needs of the pupils, the needs of the teachers, and the needs of those who are responsible for bringing equitable, appropriate education to all.

2.48 The concept of critical mass relates to the **minimum** number of persons needed to initiate and carry out a function, without consideration of long term needs

of effectiveness and efficiency. Given the numbers which need training in South Africa's education bureaucracy, this strategy also includes critical mass training needs in training provider institutions where capacity and capability are lacking at the present time.

2.49 **Assumptions concerning critical mass training needs.** Although the concept of critical mass training has been a part of training and development vocabulary and practice for a long time, there is no "formula" for arriving at a number that specifies the critical mass in a given situation. Our approach in this situation, as it has been in earlier tasks, is to state our assumptions and rationale as clearly as possible so as to contribute to the debate in a way that permits exploration and clarification from specific starting points rather than vague "guesstimates." These assumptions are spelled out in Note 7 of the Methodological Appendix. Based on these assumptions, as estimate of the number of persons to receive training in each functional area was determined (**Table 6.15**).

2.50 **Training for sustainability.** The concept of training for sustainability is concerned with achieving effectiveness, efficiency and expansion of new practices so that they are self-sustaining. This concept assumes that training is an on-going effort, eventually involving all staff (Korten and Klauss:1984). We have estimated the number of staff who should train for sustainability by considering three factors: (a) whether the functional area is a system gap; (b) how large the exodus factor is within a regional type; and (c) what the likely budget support for training will be, based on the general state of the economy. Since the backlog of training needs is equally deep in all present departments, given the poor budget support for training in all departments, no special "weight" is given to any regional type or management level for equity purposes. Furthermore, since an important function of all training activities will be to introduce a more broadly shared set of educational values and principles suitable for a new South Africa, all staff within regional types need equal opportunity to participate during the training for sustainability phase. **Tables 6.16a-c** indicate the number of staff who should receive training in each functional area in each staffing model.

2.51 **Summary.** This lengthy methodological explanation, together with the Methodological Appendix, is important to those who wish to understand the rationale taken in the quantitative side of this study--the right side of Figure 1 at the beginning of this section. It is important for those who wish to consider alternatives to the assumptions used here, since it is possible to measure the impact of changing these assumptions by entering new values into the spreadsheets which link the dynamic elements of the model. For example, a follow-up to this study might be a survey among staff at different levels in different departments about their likelihood of staying on after transformation to a new system. Such a survey would help to refine the assumptions in this study, and add new information to assumptions about the salary portion of the operating budget. Comparative information from other countries might refine assumptions about the factors used to determine annual training for sustainability, and therefore to help build sustainable budget support. In sum, the analytic model developed and used here has value in helping to develop parameters of staffing and training needs for use in this study. But, more importantly, with

continuing refinement it can be a useful tool to guide decision making in an area that is always full of conflict and short on guidelines to which a broad range of policy makers can agree.

Section 3:
EDUCATION SECTOR OVERVIEW

3.0 This section provides an overview of certain characteristics of the present education sector in South Africa. If meaningful changes are to be introduced and sustained, it is this set of characteristics which will reflect change.

The Structure of Education in South Africa.

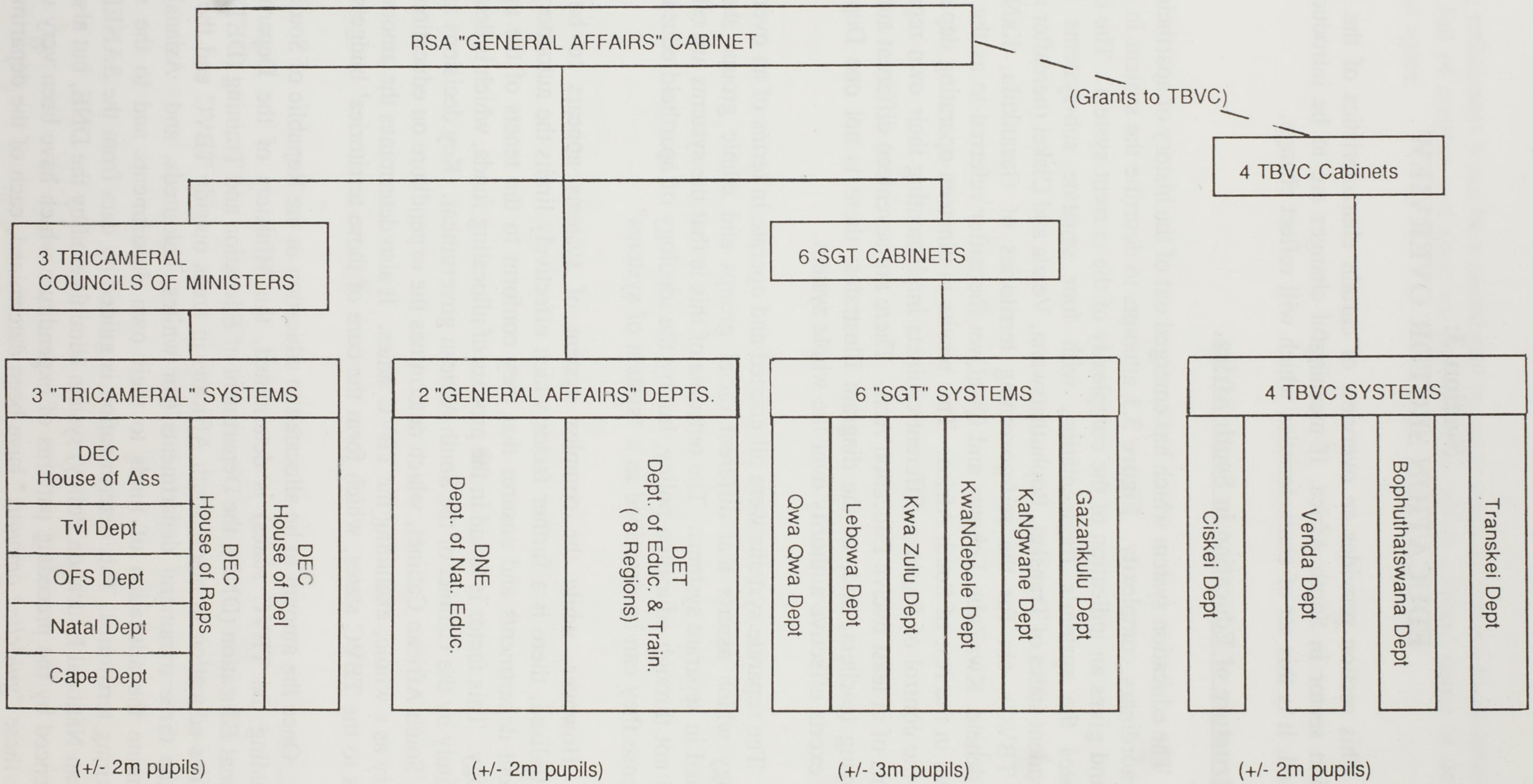
3.1 The education system which has emerged out of the history of apartheid is one of extraordinary complexity. **Figure 3.1** attempts to describe the system in graphic form and gives an indication of the complexity of the current system. The diagram illustrates the system's fragmentation, with four separate sub-systems for the independent states of Transkei, Bophuthatswana, Venda and Ciskei (hereafter referred to as TBVC), six for the self-governing territories of Gazankulu, KaNgwane, KwaNdebele, KwaZulu, Lebowa and QwaQwa (hereafter referred to as the SGTs), and five in the rest of South Africa. This results in nineteen operating departments under the control of fourteen different cabinets implementing their own regulations in terms of at least twelve Education Acts. There are seventeen different authorities employing teachers, and, as the diagram illustrates, there is not one Department which exerts effective authority over the whole system.

3.2 The separate systems were all created and operate in terms of an overarching ideology which asserts that different racial groups and ethnic groups should be educated in separate systems. The outcome of this is that the systems are ultimately linked not through education policy, but by the ideology of apartheid education. In this sense they can be described as a "system of systems"

3.3 However, while the complex system of systems appears to be highly decentralised, there is a further factor which effectively limits the autonomy of the different departments and ensures that they conform to the tenets of the apartheid ideology. This factor is found in the process of allocating funds, which is determined ultimately by the Cabinet of the South African government. Key decisions are taken in the South African Cabinet, which determines the expenditure on education for the country as a whole, excluding the TBVC states. It also determines the amount of the grants to the TBVC states, which form the core of those territories' budgets.

3.4 Once the amount to be allocated to education in the Republic of South Africa (excluding the TBVC states) is determined, the Ministers of the Department of National Education (DNE), the Department of Education and Training (DET)--which provides education to black South Africans in areas outside TBVC and the SGTs--and the three tricameral departments (for whites, coloureds, and Asians) jointly determine the allocation of funds to their own departments and to the six self-governing territories. This determination is guided by data from the SANEP (South African National Education Policy) system administered by the DNE, but also highly influenced by the preceding patterns of expenditure which have been very unequal. Once these *"guideline amounts"* have been determined, each of the departments

FIGURE 3.1 THE SOUTH AFRICAN GOVERNANCE SYSTEM



prepares its own budget and submits it to the respective legislative authority. In the TBVC territories some local revenue may be added to the grant from the central government, and the four TBVC cabinets determine the percentage of the budget which is to be allocated to education.

3.5 The effect of this system is that although fifteen separate budgets are prepared and passed by fourteen different legislative bodies, the ultimate allocation of funds is determined centrally. In addition, in times of financial constraints the effective policy discretion of each department is limited to the amount of funds available after deductions for salaries and essential recurrent expenditure, which, in all but the white department, has been approximately ten per cent of the education budget (excluding capital expenditures).

3.6 The accountability of the different departments is also constrained by problems of over-centralization of control and limited legitimacy, with the latter an issue particularly with DET, SGTS and the Houses of Delegates and Representatives. While some of the departments have advisory bodies for policy formulation, these bodies play a minimal role in the determination of policy. The result of this is that policy, beyond allocation of funds, tends to be formulated and implemented by the bureaucrats within the system, with little public access to the process. For example, major policy shifts, such as the white departments' introduction of *"Models A, B and C"* schools, emerge from the authorities and are implemented on the basis of *ex post facto* consultation with a limited range of individuals identified by the bureaucrats.[1] Thus, while there have been recent efforts to decentralize control in some departments in the "system of systems", these efforts have not had the effect of widening access to the policy process to include the primary stakeholders of education in any meaningful way.

Education System Characteristics.

3.7 In the following paragraphs and tables, characteristics of the education system are discussed which demonstrate differences in the system as a result of apartheid. The breakdown of system characteristics into racial categories, or groups, is used to underline how inequality has been structured in South Africa by government actions, and should not be interpreted as conferring legitimacy or validity to these labels. In the following tables, racial categories are presented in the order of size of the pupil population within the racial categories. In the black category there are three sub-categories; DET (with the largest number of pupils of all 18 departments), the SGTs, and the TBVC states.

3.8 **Expenditure differences.** There are many ways to illustrate the impact of the apartheid education system, but none is as succinct as the comparison of expenditures per student by racial group. The following Table shows the differences, and while

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[1]. These models refer to alternative models in House of Assembly schools which permit semi-privatization of schools, and give parents control over admission policies in return for assuming a larger share of recurrent costs.

there is a stated commitment by government to close the gap, this commitment has been abandoned in recent years, due to the pressures of the faltering South African economy.

Table 3.1

Per Capita State Expenditure for Teacher Training College/School Education in the RSA (excluding private ordinary schools) according to Racial Group, for 1986 and 1989

Racial Group	Per Capita Expenditure (Rand)		% Increase
	1986	1989	
Black DET	610	927	52
SGTs	347	647	86
TBVC	NA	NA	
White	2,746	3,572	30
Coloured	1,330	2,115	59
Asian	1,952	2,645	36

Source: DNE. Educational Realities in South Africa 1990. Pg.47

3.9 **Teacher qualifications.** The main factor explaining the disparities in educational funding is the differences in teacher qualifications. Under South African law, teacher salaries are determined by qualification level, which itself is a function of educational preparation. Under recent law, all teachers with the same qualifications and experience receive the same pay, regardless of racial group. While this situation is a major step in the direction of equity, the realities are that black teachers have not had the same educational opportunities as other racial groups. This is shown in the following table. Since the vast majority of educational funding goes towards salaries, and since salaries are a function of qualifications, it is inconceivable that parity in funding, by racial group, can be achieved in the near future. Political leaders and policy makers under a new dispensation need to understand this reality and explain it to the masses, who may expect immediate parity. The process of upgrading the qualifications of thousands of black teachers may take a decade or more, as seen in the case of Zimbabwe, and must be strategically focused or it will have serious fiscal implications without appropriate gains in the quality of education. In other words, serious consideration should be given to rationalizing the linkage between upgrading teacher qualifications, in order to upgrade salaries, and the educational priorities which the nation faces.

TABLE 3.2:
Teacher Qualifications According to Racial Groups in 1990

Population Group	School Stage	Without Professional Qualifications	With Professional Qualifications	Total
Blacks	Primary	19819 (16%)	105659 (84%)	125478
	Secondary	5112 (8%)	59651 (92%)	64763
	Total	24931 (13%)	165310 (87%)	190241
Whites	Primary			
	Secondary			
	Total	-	-	53101
Coloureds	Primary	921 (4%)	23150 (96%)	24071
	Secondary	650 (5%)	11633 (95%)	12283
	Total	1571 (4%)	34783 (96%)	36354
Asians	Primary	61 (1%)	5872 (99%)	5933
	Secondary	115 (2%)	5474 (98%)	5589
	Total	176 (1.5%)	11346 (98.5%)	11522

RIEP, Education and Manpower Development: 1990

3.10 **Teacher-Pupil Ratios (TPR).** Another clear indicator of the effects of the apartheid system of education is seen in the ratio of teachers to pupils in the public schools systems, according to racial groups as shown in Table 3.3. In recent years, combined political pressure, declining birth rates, and the worsening economy have created pressures towards making the white, coloured and Asian departments more efficient--that is, raising their TPR--but increasing birth rates and resource shortages have mitigated against any significant changes in the departments serving black populations. Furthermore, if one considers the numbers of school age children in the black population served by DET, TBVC and SGT departments who are <u>not</u> in school, the disparities in TPR could be much worse. Moulder (1991:p.33) estimates that this number could have been more than 1 million pupils in 1987.

TABLE 3.3
1989 Teacher-Pupil Ratios According to Departments

Education Department	Teacher Pupil Ratios
Education and Training (RSA Black)	36.3
Self-governing Territories	41.0
TBVC States	38.1
House of Assembly	17.6
House of Representatives (Coloured)	23.5
House of Delegates	21.6

Source: DNE. Educational Realities in South Africa 1990. Pg.47

3.11 **Matriculation Examination Results.** Another measure of inequities among the race-based education systems in South Africa is that provided by examination results at the completion of Standard 10. It is recognized that matriculation examination results are not the best indicator of education quality outcomes; nevertheless, these scores are useful for this purpose for the time being. Table 3.4 indicates that while scores for white, Asians and coloureds improved between 1986 and 1990, scores for blacks dropped, reflecting the deterioration of conditions in black schools. Internal conditions have deteriorated as a consequence of continued resource shortages, rising population growth and loss of control within schools resulting from external conditions. The external factors include rising community violence, which has disrupted schooling through boycotts and other activities which have made regular school participation problematic.

Table 3.4
Std 10 Exam Results for all Racial Groups
As Indicated by Per Cent Passing: 1986 - 1990

Year	Blacks	Whites	Coloureds	Asians
1986	51.6	93.1	67.6	87.1
1987	56.1	95.1	72.7	95.2
1988	56.7	96.1	66.0	95.1
1989	41.8	96.0	72.7	93.6
1990	36.7	95.8	79.4	95.0

RIEP, Education and Manpower Development: 1990. Pg. 14.

The Educational Bureaucracy

3.12 While teachers, classrooms and learning resources are generally seen as the primary inputs of educational systems, attention in this study is given to the bureaucracy within which these resources are put to work. It is the bureaucracy's skill in planning and managing resources which ultimately affects educational outcomes. Both qualitative and quantitative indicators of bureaucrats are elusive; at best one can intuit that too few will result in poor planning and crisis management, while too many will divert resources away from classroom needs, and contribute to an organization culture which inhibits innovation and adaptation.

3.13 **Pupil:Professional Staff Ratios (PPSR).** As suggested above, one measure of educational bureaucracy is the number of professional staff employed by departments in managerial and supervisory positions in head offices (and regional offices, where such exist). For purposes of this study, all professional and administrative staff employed at departmental head offices and regional offices, in all College/School Educator Post Levels and all Officer levels and above in the Public Service Commission civil service structure, assigned to education departments, are considered part of the professional staff, and all clerical level personnel at the head offices are considered part of the clerical staff. School level managers, such as principals and newly created "management councils" in Model C schools are not included in this classification, since there is relatively little uniformity in the amount of management autonomy among principals and management councils across the range of the 18 departments. In the current system, the number of managers, expressed in terms of pupil-professional staff ratios, varies considerably among the education departments, as shown in Table 3.5. The total number of professional staff positions reported (including vacancies), divided into pupil enrollment in the department (excluding university and technikon students) yields the ratios shown below.

Table 3.5
Pupil-Professional Staff Ratios by Departments

Departments	Professional Staff	Enrollment	PPSR
Lebowa	85	929,043	10930
Ciskei	58	287,453	4956
Transkei	266	1,161,664	4367
KaNgwane	63	226,809	3600
KwaZulu	453	1,540,852	3400
Venda	71	231,830	3265
Gazankulu	148	318,667	2153
Bophuthatswana	277	573,664	2070
Representatives	475	841,387	1771
Delegates	165	233,101	1413
KwaNdebele	109	141,126	1295
QwaQwa	77	106,9.720	1390
Natal	127	120,973	953
DET	2,675	2,249,340	841
Cape	297	249,994	841
OFS	98	82,335	840
Transvaal	790	605,931	767

Source: Professional staff data provided by departments during this study.

The specific grouping of professional and administrative positions and post levels used in this study are as follows:

Executive[2]: Director General, Deputy Director General, Chief Director;

Middle Management: Director, Deputy Director, and Education Post Levels CS[3] 8 & 7;

Supervisory: Assistant Director, Officer and CS Educator Post Levels CS 6 and below;

Clerical: all positions at head office in clerical and administrative positions not included in the above.

3.14 **The executive level.** Executive level management positions in the educational bureaucracy fall under the Commission for Administration (CFA), which is the career civil service system, rather than the professional educational structure. This pattern also exists in the TBVC and self-governing territories. The significance of this is that it opens up possibilities for lateral entry into senior policy and management positions by persons who have not risen through the ranks of the education bureaucracy, and may therefore bring fresh ideas into the system. However, the reality is that most of these positions are filled by career educationists who have risen to these positions without benefit of special training in policy analysis or management, as the needs analysis in Section 5 indicates. The number of staff at the executive level in the departmental groupings, and the resultant pupil:professional staff ratio were shown in Table 2.3 in Section 2.

3.15 **The Middle Management Levels.** The size of middle management varies significantly among education departments, with the better resourced departments unsurprisingly having more middle management capacity. In the departments of the Houses of Assembly, Delegates and Representatives, there is growing retrenchment pressures in these ranks. For example,in the white departments, the transition to the Model C plan of school management has meant that most of the positions concerned with school provisioning are being eliminated, as this responsibility has been turned over to individual school management councils.

3.16 **The Supervisory Level.** The supervisory level, which we define as the portion of the bureaucracy which provides what has traditionally been called the supervisory and inspections services, is possibly the most problematic in the departments. The difficulties arise from three sources of tension; redefinition of the role of inspectors and supervisors; issues of legitimacy which limit access by supervisors and inspectors

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[2]. Executive in the South African context does not refer to Cabinet level.

[3]. "CS" refer to educators in Colleges of Education and Schools, and their controlling education departments. The CS post is used to differentiate these positions from teachers in technikons and universities.

to schools; and insufficient numbers of inspectors to cope with the numbers of schools, principals and teachers needing their assistance.

3.17 Regarding the problem of role definition, there is an effort to have inspectors and supervisors act as mentors and facilitators to the principals and teachers they work with. Unfortunately, they have not been provided the training necessary to make the change in outlook and behavior required for these roles, and tend to be caught in a situation where neither they nor the school-based staff they work with are sure of themselves. In the white departments, the matter is further complicated by the transition to Model C schools, where there is uncertainty about the authority and responsibilities of inspectors and supervisors vis-s-vis the new management councils.

3.18 Issues of legitimacy plague several departments, notably the Department of Education and Training, which serves the black population in Republic of South Africa (RSA) areas. As a consequence, it is virtually impossible for inspectors and and subject area supervisors to visit schools in some areas. Under these conditions, it will be difficult to introduce and monitor changes in the educational system.

3.19 As shown in Table 2.3, the number of positions at the supervisory level varies substantially across departmental groupings. Those departments with the greatest need, given the lowest level of qualifications of teachers, have the **low**est numbers of supervisory staff because of resource shortages. A major challenge facing the new educational system will be increasing the supervisory capacity in these areas.

3.20 **The Institutional Level.** This study does not examine the institutional level of the educational system. As further efforts attempt to strengthen the educational system, it will be necessary to link capacity building at the institutional level with efforts at other levels.

3.21 **The Clerical administrative structure.** In all education departments there exists a clerical administrative structure which processes the paperwork that results in teachers getting paid, pupils receiving text books and other acts of operational necessity. These structures are staffed by personnel subject to civil service authorities, rather than the educational bureaucracies they serve. This is significant, because it raises a major issue of institutional authority and loyalty. Although outside the scope of this study, understanding of the commitment, capacity and capability of the administrative structures to support the goals of a new educational dispensation is essential to planning and implementing a successful transition. For this reason, data on the clerical staff are included in staffing and training needs analysis, and the pupil:clerical staff ratio was indicated in Table 2.4 in Section 2. That Table indicated the disparity in clerical staffing among the departments. Clerical administrative staff at the school level is also obviously essential to the effective functioning of schools. This study produced no data on this matter, although anecdotal evidence suggests that school-based clerical staffing is very thin in DET, TBVC and SGTs.

Section 4:
ASSESSMENT of EXISTING PROFILE of EDUCATION PLANNING AND MANAGEMENT SKILLS:
Areas of Existing Strengths

4.0 In the assessment of existing skills in Sections 4 and 5, considerable emphasis has been placed on the self-assessment made by departmental staff in their interaction with the study team. In all interviews, the study team was impressed by the degree of candor displayed, and by the preparation staff had made prior to the visit of the study team. As indicated in the Introduction, the study team communicated with departmental staff prior to their visit, listing the areas of skills which were to be discussed. In most visits, the team was led through a review of the skill areas which reflected considerable discussion among appropriate staff members prior to the visit of the study team.

4.1 In adaptation to the self-assessment and analysis, the study team made several observations about professional strengths which transcend departmental classification and categorization of skills. These observations bode well for the education profession's capacity to undertake the challenges inherent in restructuring South Africa's education system. These strengths include:

a. a strong professional commitment to providing quality education to all South Africans;

b. a strong desire to "get going" with the task of creating a unified system of education;

c. openness to the need for profound changes in the existing system;

d. a desire to be more responsive to local needs and considerations;

e. open acknowledgement in the more favorably resourced departments to past inequities;

f. initiatives already underway to initiate cooperation among departments serving the same regions.

The Tricameral Departments.

4.2 **Financial, personnel and procurement skills.** The tricameral education departments--the four provincial departments of the House of Assembly, and the departments of the Houses of Delegates and Representatives-- have several notable areas of strengths. All have financial management systems which provide top managers with accurate information. All departments use a common financial management system (FMS2), which assures consistency and efficiency in operation, and bodes well for the eventual merger of departments. All have personnel administration systems which assure timely payment of salaries and benefits, and

provide managers with accurate information about their human resources. All departments are using the recently established personnel and salary system (PERSAL) which, with modifications, could serve personnel management needs specific to the education sector. All have procurement systems which assure efficient provisioning, and are part of a larger tendering system which serves all government agencies. It is not clear how the shift to Model C schools will affect certain procurement operations, especially in the area of inventory control, since this responsibility has now been given to institutional management councils. Nevertheless, whatever system changes may be made, it can safely be assumed that personnel within these departments have the skills necessary to make adaptation and maintain well run systems.

4.3 In the cases of the Houses of Delegates and Representatives, their basic management systems serve all functional departments, not just the education department. This causes some delays and loss of fiscal autonomy, but the basic systems work reasonably well, and the staff who operate them are competently trained to carry out their responsibilities.

4.4 **Education planning.** The function of educational planning is carried out reasonably well in these departments, considering that few who fill these positions have had extensive professional training as educational planners. However, the reality is that in recent years, these departments have not experienced substantial growth, and the demand for educational planning skills has been limited. It is not clear whether staff in these departments would have the skills, or the necessary information bases, to contribute to the planning needs of the departments which are experiencing substantial growth.

4.5 **General management skills.** What might be considered general management skills--the ability to plan and organize activities, monitor their implementation, coordinate the use of resources; plan and conduct meetings with diverse constituencies, etc.--are generally present and well used in these departments. Roles are well defined, and through a process of patient mentoring and informal on-job-training, educationists without management training acquire and practice a form of managerially based "elevated common sense." This is judged to serve these departments reasonably well, during periods without substantial growth or change.

4.6 **Education research, development and evaluation.** The capacity of these departments to initiate and conduct research and development in the field of education varies considerably. Some, such as the Cape Education Department, rely on the capacity of universities in the region to conduct contracted research for the department. By contrast, the Transvaal Education Department has a large research staff, and a substantial research agenda. While the study team had questions about the relevance of much of this research, in view of the challenges facing the education system, it is apparent that adequate research skills and resources exist and with different orientation could undertake needed research.

The Department of Education and Training (DET).

4.7 **An emerging regional model.** The DET, the largest department in the existing education structure in South Africa, offers a timely and interesting model for transition to a regionally decentralized structure. In recent years this department has made substantial progress towards decentralizing decision making. Evidence of this can be seen in the development within regions of decision making process which reflect the initiative and style of regional directors. For example, the Orange-Vaal region has begun using a "management by objectives (MBO)" technique to rationalize resource utilization and monitor progress towards achieving regional objectives. The Northern Transvaal region has initiated a form of program budgeting, and has successfully experimented with an increased level of authorization for capital expenditures which has substantially reduced the time and costs needed to construct classrooms. The Department continues to experiment with subregional models of inspection and supervision, as well as a structure of institutional management council representatives at the subregional and regional levels. In short, notwithstanding the department's severe problems of legitimacy in portions of the population in serves, it has demonstrated a strength in experimenting with regional decentralization which merits further study.

The TBVC states.

4.8 **Financial, personnel and procurement skills.** The TBVC states generally have management skills in the areas of finance, personnel and procurement which are adequate for managing present levels of resources, although there are differences among these states. Bophuthatswana, the better resourced of the four, appears to have the better developed systems and staff. Ciskei has also made considerable progress in developing basic management capability in these areas among a limited number of staff.

4.9 **Educational planning.** There is an emerging capability for educational planning in the TBVC states. For example, Ciskei and Bophuthatswana have recently developed information systems which can provide institutionally specific data on all relevant planning factors (pupil information by standard and age, teacher information, and classroom and learning materials availability). However, considerable staff development is needed before these systems can be fully used.

The Self-Governing Territories.

4.10 **Financial management.** The SGTs are using the financial management system used by the rest of the education departments in the RSA, the FMS2 system. Consequently, there is an adequate "system base" for basic financial control. Obviously, severe resource shortages have prevented expansion of the system and development of staff. There is little delegated authority in the financial systems of SGTs; a central department of finance handles most matters.

4.11 **Personnel management.** In general, the SGTs are using computerized check writing systems, and several are considering adopting the PERSAL system recently installed in House of Assembly departments. A considerable strength of personnel departments in the SGTs is that they are able to attract competent personnel professionals. This reflects a strong professional personnel infrastructure within RSA, albeit one that has been slow to manifest affirmative action programs because of policy resistance in key political structures.

4.12 **Procurement.** The basic procurement system found in the SGTs is the same as in the rest of the education departments. However, in the SGTs there are more external pressures which affect the operation of this system. Further, there is considerable need for strengthening human resources required to make all components of the system work efficiently (inventory, ordering, distribution, etc.) In effect, the SGTs have the framework of a procurement system, but because of limitation in computerized management information systems regarding procurement, the overall procurement process does not work efficiently. This need reflects the general resource shortages faced by the SGTs.

Section 5:
NEEDS ASSESSMENT:
PLANNING and MANAGEMENT SKILLS
UNDER a NEW DISPENSATION

5.0 The highest priority **training needs** identified in visits to and discussions with education departments are discussed in this Section. As might be expected, some areas of need are found in all departments, and some tend to be concentrated in departments that were established more recently than others, have traditionally received fewer resources (on a per student basis), and have experienced higher growth in demand for education services, due to population growth.

Training demands created by "System Gaps".

5.1 Assuming that most professional staff will continue employment under a new dispensation, albeit in different structures, it is useful to review these needs within their present contexts. What this reveals is that many of the higher priority training needs, even in the better resourced departments, result from "system gaps". There are two types of system gaps: one type is concerned with system management; the other type is concerned with service delivery in the education system. The first areas addressed below are concerned with these "system gaps". In this section these gaps are merely identified, as a means to establish a framework for discussing training needs. In Section 7 the issue of "system gaps" is addressed further, within the context of "prior capacity building steps" which need to be initiated in conjunction with the development of training plans and activities. System gaps prevent departments from operating in an accountable, self-correcting, effective and efficient manner, and will require attention under a new dispensation if sustained progress towards an education system based on sound, equitable principles is to receive widespread support.

5.2 **System management gaps.** The missing components concerned with system management gaps are:

a. a policy setting structure responsible for the entire education sector, capable of analyzing policy options and outcomes, and managing policy decisions made by political authorities;

b. management information systems;

c. monitoring and evaluation systems;

d. the linkage of planning activities to budget development processes, and the use of program budgeting techniques to develop and control budgets in all educational delivery systems;

e. comprehensive public communications to promote and assure transparency in advisory and decision structures.

f. capability to plan and guide extensive organizational change, involving structures, policies, procedures, personnel and management culture.

5.3 Unless and until these system gaps are corrected, it will not be possible to implement an effective, decentralized educational system. Furthermore, widespread training in procedures inherent to these systems cannot be initiated until systems have been designed. However, some training can be initiated for those who will be involved in system design and implementation, and this training should focus on understanding basic principles of operation of such systems, and acquiring general skills in the following:

a. analysis of policy options and outcomes;

b. use of management information systems to make timely adjustments in the deployment of human, financial and material resources for purposes of achieving operational goals of quality, equity and efficiency at all levels in educational delivery systems;

c. use of monitoring and evaluation techniques to assure appropriate and timely collection and analysis of performance indicators at all levels in educational delivery systems, and to provide the basis for corrective actions;

d. use of program budgeting techniques to develop and control budgets in all educational delivery systems; systematic linkage of budget to educational planning activities; and, the use of expertise in financial analysis to guide decision making regarding allocations of human, financial and material resources;

e. use of public communications to promote transparency in the advisory and decision processes of education systems at all levels, in order to increase legitimacy and accountability;

f. use of organizational change strategies and techniques to facilitate transformation of the education sector bureaucracy.

5.4 **Service delivery gaps.** There exist, in varying degrees across departments, gaps in types of service delivery caused basically by resource shortages. These are "function" gaps; if the education sector under a new dispensation is to achieve its promise and expectation of redressing past inequities and linking the education sector to the economic sector more effectively, these functions and their relevant structure will need to be developed, and education professionals responsible for service delivery will need appropriate training. The service delivery gaps are:

a. planning, organization and delivery of career guidance, psychological counseling services and other specialized and support services;

b. planning, organization and delivery of adult education programs which address basic literacy, vocational training and civic responsibility needs;

Other training needs common to all or most departments, and necessary for a new dispensation.

5.5 Beyond these system gaps, the study team and departmental self-assessments identified a range of other training needs all having high priority--that is, a sense of urgency in developing capability in fundamental areas--and persisting across most or all departments.

5.6 **Special targets of organizational change.** To emphasize the critical importance of this system gap, two areas of change were highlighted in field visits which merit special mention here:

a. training for supervisory and inspection staff which would lead to a reorientation towards supervision and staff development through more use of creative dialogue and collaboration with teachers;

b. planning and implementation of effective affirmative action programs in order to promote more women, blacks, and diverse ethnic groups into positions of responsibility from the institutional level to the top policy and management levels.

5.7 **Managing programs to improve school level management.** Across departments there is a strong orientation towards improving management at the school level. Efforts are under way through departments and external assistance such as consultants, universities, nongovernmental organizations to address this need. What this study determined is that there is relatively weak ability to plan, manage and evaluate training efforts to improve school level management. This weakness relates to a general lack of resources, reflecting current "rationalisation programmes" in all departments, and to the history of a highly centralized system of education planning and management. The long term effect of a highly centralized system has been the lack of incentive for creative, responsive and original planning at the departmental or operational level, not only as it concerns school level management, but in most other professional functions as well.

5.8 **Curriculum Planning and Development.** A striking feature of the South African education system is its top down approach towards curriculum planning and development. Core curricula are defined centrally and distributed to the departments for minor additions to the core content, based on local or regional circumstances. In practice, most departments, with the exception of some of the House of Assembly departments, merely adopt the central curriculum. White departments dictate the pace and content of the school curriculum, with black departments only marginally involved. Curriculum planning cycles (4-6 years) are followed in strict accordance with a pre-planned time schedule, rather than in

response to the generation of new knowledge or on the basis of systematic curriculum evaluation.

5.9 The consequences of this centralized curriculum planning and development model include:

a. the lack of a regionally responsive school curriculum; (it is noted that the OFS Education Department has developed what it regards as "modernized curriculum requirements for a new South Africa"--at least in OFS);

b. the lack of incentive and capacity to plan and evaluate curricula at the department and regional levels, particularly in the black departments where senior black officials lack essential skills for making informed decisions on curriculum planning and development;

c. the lack of supervisory and support services which link curriculum planning between central and institutional levels in such a way that teachers can become active participants in the curriculum development process.

5.10 To address this problem, extensive training in curriculum development, research and evaluation is needed. To be effective, such training would require extensive reorganization of the current curriculum planning system, including the possibility of strong decentralization measures, and linkage with curriculum development and evaluation efforts in nongovernmental organizations, university based faculties of education, and private schools.

5.11 **Supervision and Inspection (SI) functions.** Generally, the purpose of supervision and inspection is to raise the effectiveness of the teaching/learning process. However, in most departments in South Africa there are problems concerning the supervision and inspection functions. In the House of Assembly departments, the organized teachers associations have assumed many of the supervisory roles, through the "teachers centres", while the inspection function has become marginalized by the adoption of the Model C plan. In the DET the primary problem is one of legitimacy, resulting in lack of access to schools by supervisors and inspectors. However, in areas where SI is exercised in black schools, there are several problems which reflect on the quality of management and planning at department level:

a. supervision, particularly in secondary schools, is strongly biased towards improving examination results rather than improving the overall quality of education within schools;

b. supervision is often linked to teacher assessment and merit awards rather than focused on teacher development;

c. supervision is often performed in isolation of the devastating working conditions of most teachers, yet requiring standard performance

measures irrespective of the teachers' working context which generates considerable resentment among teaching staff;

d. supervision is often focused on following department requirements rather than creating a dialogue in which teachers and supervisors engage collaboratively in reflection on how to improve educational practice in schools.

5.12 Clearly, significant structural changes are needed in the functions of supervision and inspection before training can begin to have telling effects. Presumably, a new dispensation will eliminate or reduce the problems of legitimacy facing many of the existing departments. Assuming these changes, training of supervisors in the black departments should focus on upgrading subject areas skills. Supervisors in most departments need to develop skills in communication and teacher development and classroom problem solving.

5.13 Training related to the inspection function needs to focus on the basics of effective school management, ranging from managing community relations to managing human, financial and material resources, to implementing and monitoring basic quality control programs. It should be noted that considerably more study of the linkage between the training of inspectors and the training of school administrators needs to be undertaken, and that coordination in the design of training efforts for these two groups of educational professionals is essential.

5.14 **Specialized and Support services.** As mentioned earlier, the declining economy in South Africa has put pressure on the educational system, and the areas of specialized and support services have generally been the first to feel these pressures. There are notable exceptions: for example, the Bophuthatswana Education Department has well resourced support services, under the Directorate of Professional Services. Every secondary school has a full-time Guidance Counsellor, whose performance is regularly monitored and evaluated. Seminars and workshops are regularly conducted, ranging in topics from management skills to sexuality education and Aids. Recently, principals, teachers and guidance counsellors attended a session addressing the administration, scoring, and interpretation of the SATB (South African Test Battery) for Standards 6 and 7. However, in most black education departments, guidance is offered as a non-exam subject. It is often allocated to teachers "who do not mean business" in that they do not prepare students for external exams. Guidance periods are often used for exam subjects. Most black guidance inspectors have had no formal training in guidance as a discipline, and most black principals do not supervise classroom instruction for guidance.

5.15 Specialized and support services such as guidance counseling need significant increases in financial support. Policy choices need to be made concerning the most cost-effective way of providing such services. It may be desirable to contract out the provision of some services to nongovernmental organizations and/or the private sector. Whatever the service delivery means, however, widespread, comprehensive training will be needed if the quality of service is to be improved and sustained.

5.16 A particular area of concern is that regarding services for the developmentally disabled. Such services exist in the white departments, where education is compulsory; however, in the black education departments, where education is not yet compulsory, these services do not exist. Considerably more effort will be needed to begin planning and developing adequate responses to the special education needs of this group. There are a few independent schools (such as the Ikemeleng Remedial Education Centre in Soweto and the Harvey Cohen Centre in Eldorado Park) offering remedial education to black students with learning and physical disabilities. These programs may suggest models for delivering education services to this population.

5.17 **Educational research, development and evaluation.** There is limited capacity and capability for educational research and development, and related evaluation, in most departments. Some experts claim that research focused on improving practices or generating information which would guide planning is virtually non-existent. Evaluation systems do not exist, and planning in the professional divisions of departments is either driven by fixed planning schedules or merely reactive to problems as they occur at school sites. Proactive planning and research related to teaching capacity or curriculum implementation are generally absent. The lack of quality information, often generated by systematic research and evaluation, is perhaps the single most important limitation to effective management and planning capacity in education departments.

5.18 **Teacher development.** A conclusion of this study is that there is not a tradition of systematic, focused inservice teacher training in South Africa. Evidence of this is the lack of detailed planning at head offices for inservice training, and the lack of financial resources for this function. The predominant form of teacher support, where it is possible, is in the form of infrequent visits by subject advisors.

5.19 However, in certain departments there is an active and increasing involvement of nongovernmental organizations in the provision of teacher development at the school level. Organizations such as Molteno, READ, CASME and TOPS provide critically needed services in the absence of centrally planned and funded activities. However, these programs are often poorly managed by the individual departments and no systematic linkage exists which could make the contributions of NGOs a cumulative and focused experience for the department, school or individual teacher.

5.20 In addition to the training needs outlined above, the following needs exist in some of the TBVC and most of the self-governing territories:

a. Basic management skills. Managers of the education departments have come to their positions from backgrounds as teachers and have no preparation for their management and supervisory roles. In addition, because of the separation from the other, better financed education departments, they have few role models for good management practices. As a consequence, there is widespread need for training in basic management and supervision, particularly as concerns planning, delegating and supervising the day-to-day flow of work at all levels and in all organizational units of education systems.

Effective use of performance appraisal systems. Performance appraisal is not well developed in education departments. Various reasons exist for this situation, including cultural barriers to direct confrontation of performance problems. However, if effective decentralization of education is to be expected, honest performance appraisal practices need to be instituted. This will require substantial training, at all levels. It will also require the development of clear performance goals and standards, and the implementation of incentive systems which support and sustain better performance.

Skills to make procurement systems work more efficiently. As noted above, some of the education departments in this category have reasonably good procurement policies. However, what is missing in most of these departments is a network of skills and computerized inventory control systems which would make the implementation of procurement policies much more efficient, and contribute to assurances that pupils will have appropriate learning resources at their disposal throughout the school year. If the World Bank and other donors embark on programs to augment substantially the availability of learning resources in the populations served by these departments, it is essential to initiate appropriate skill development and system enhancement, such as computerized inventory control, before massive aid programs are implemented.

Development of practical, relevant professional training programs (skills in needs assessment, training design and evaluation). Education departments in this category are particularly weak in skills related to the planning and implementation of professional development programs of any nature. This weakness is due to the resource shortages historically experienced by these departments. If one assumes that policies will be initiated under a new dispensation to reverse this situation, it will be necessary to initiate a crash program of training trainers in professional development programs. These training programs will need to focus on tasks of managing educational activities at all levels and facilitate the development and use of management skills by educators in all roles and activities. Inherent in the design of training of trainers programs is the need to emphasize basic skills in assessing training needs, designing training programs that utilize adult learning theories and practices, and institutionalizing evaluation practices that are linked to performance appraisal and incentive systems.

Section 6:
ASSESSMENT of STAFFING and TRAINING NEEDS:
Quantitative Considerations

6.0 **Introduction.** This section reports on the analysis of the quantitative dimensions concerning training needs for education sector planners and managers in a new system. It answers the questions of how many need training, in what functional areas, at what levels of management within regional types and the ministry head office. What follows in this section is (a) a summary of the findings of staffing and training needs within the context of one scenario and staffing model--the "mixed" options of each; (b) an analysis of staffing and training needs for the whole system, followed by (c) an analysis for each of the "regional types" and the head office of the ministry. In each of these subsections the analysis follows a sequence of determining staffing needs based on pupil:staff ratios, adjusting staffing needs based on the "cushion" factor and the "exodus" factor; followed by a determination of training needs in high priority content areas and allocated to "critical mass" training to be undertaken immediately, followed by "training for sustainability" in subsequent years. The training needs are also adjusted for budget, "system gaps" and exodus factors.

6.1 While the analysis was done within the context of three scenarios, this section will focus on reporting findings only in the mixed staffing model, which is the outgrowth of the mixed scenario. At key points analysis from the comprehensive and selective staffing models, outgrowths of the optimistic and pessimistic scenarios respectively, will be summarized and presented to provide benchmarks of comparison, and suggest answers to the inevitable "but, what if" questions. Reporting in depth on one model results in a higher level of comprehension than trying to keep "three balls in the air". The mixed scenario is used because at this point in time it seems to be the most realistic. In essence, it <u>is</u> the current state of affairs in South Africa, although admittedly when one reviews the past year there were times when either of the other scenarios seemed most probable.

6.2 **Summary of the analysis.** The main findings, under the mixed scenario and staffing model are as follows:

a. Current staffing patterns, in terms of pupils:staff ratios, show significant variation along racial and regional lines, with black, rural regional departments at a significant disadvantage.

b. If current staff were redistributed on a pupil:staff ratio, all rural, black departments would gain staff. In the TBVC and SGTs, gains would take place in all four staffing levels, with three minor exceptions.

c. Projected pupil enrollments by 1997, used as a basis for calculation staffing needs in the target year of 1993, would result in the following staff changes: an increase in staff positions by 16%, to a total of 14,121, as compared with 12,221 currently.

d. The staffing changes would provide a new government with important opportunities to introduce new ideas, and new blood. They also introduce confusion (as part of the total restructuring of the educational system) and create considerable training demands.

In comparison, there is a 40% gain in the comprehensive model, giving a total staffing of 17,145; in the selective model, there would be a 12% gain, to a total of 13,658. (Source: Tables 6.9 M,N, and O in the Appendix)

e. Based on the training needs model used in this analysis, there will be a need to provide training to approximately 5400 staff, but realistically, resources may not permit training of this number. It is suggested that training for "critical mass" be initiated as soon as possible to overcome system gaps in both the educational system and the training provider system. Critical mass training would be aimed at 2,430 staff members from both the bureaucracy and training providers. An additional 685 a year for four years ought to receive training to facilitate transformation and integration of basic management subsystems (finance, personnel and procurement) within the new educational system and to address other high priority areas of training need. (Source: Tables 6.13e and 6.16b.)

Overview of Staffing and Training Needs

6.3 **Current Staffing imbalances.** Analysis of training needs starts with an analysis of the staffing situation. Current staffing patterns, in terms of pupils per staff ratios, demonstrate significant inequities along racial and regional lines, as shown in **Table 6.1**. If staff were redistributed according to the criteria put forward in the Section on methodology, that is, based on an equitable pupil:staff ratio, the present system should be operating with a staff of almost 20,000 instead of 12,221. The rural, black departments in our Regional Type X need over 4,000 more staff than they currently have, an increase of approximately 187% positions, in order to be staffed at the same proportional basis as urban areas.

6.4 **Staffing needs.** Moving from the present to the future, if the same staffing criteria are applied to the enrollment projected for 1997, the resulting staffing requirements for 1993 under the mixed scenario, after adjustments for the "exodus" and "cushion" factors explained in the section on methodology, are 1,899, as shown in **Table 6.2**. Staff growth at the executive level would have the highest rate of increase, reflecting the lack of executive positions in many black departments today. Substantial growth in clerical level positions would also be needed to reach the suggested pupil:staff ratio. Under the mixed model, growth at the supervisory level would be modest, which may present a challenge in introducing and sustaining new practices/of supervision at the school level.

TABLE 6.1: MANAGEMENT POSITIONS BASED ON PPSR AND PCSR

		EXECUTIVE		MIDDLE		SUPERVISORY		CLERICAL		TOTAL		% CHANGE
DEPARTMENT	ENROLMENT	CSL	TSN	CSL	TSN	CSL	TSN	CSL	TSN	CSL	TSN	
Bophuthatswana	573664	2	7	52	121	223	278	98	583	375	989	164%
Ciskei	287453	5	4	12	60	41	139	135	292	193	496	157%
Gazankulu	318667	1	4	28	67	119	154	504	324	652	549	-16%
KaNgwane	226809	0	3	14	48	49	110	47	230	110	391	255%
Lebowa	929043	1	12	18	195	66	450	94	944	179	1602	795%
Transkei	1161664	9	15	85	244	172	563	328	1181	594	2003	237%
Venda	231830	2	3	14	49	55	112	70	236	141	400	183%
TYPE X TOTAL:	3729130	20	48	223	784	725	1808	1276	3790	2244	6429	187%
Delegates	233101	3	3	49	49	113	113	89	237	254	402	58%
DET (Type Y)	1483502	7	19	303	312	1078	719	1221	1508	2609	2558	-2%
KwaNdebele	141126	0	2	17	30	92	68	68	143	177	243	37%
KwaZulu	1540852	5	20	97	324	351	747	128	1566	581	2657	357%
Natal (Assembly)	120973	2	2	36	25	89	59	173	123	300	209	-30%
QwaQwa	106996	0	1	13	22	64	52	33	109	110	184	68%
Transvaal (Assembly)	605932	3	8	145	127	642	294	639	616	1429	1045	-27%
TYPE Y TOTAL:	4232482	20	54	660	890	2429	2052	2351	4301	5460	7297	34%
Cape (Assembly)	249994	3	3	78	53	216	121	289	254	586	431	-26%
DET (Type Z)	765838	4	10	156	161	557	371	630	778	1347	1320	-2%
OFS (Assembly)	82335	2	1	33	17	63	40	100	84	198	142	-28%
Representatives	841387	2	11	162	177	311	408	207	855	682	1451	113%
TYPE Z TOTAL:	1939554	11	25	429	408	1147	940	1226	1971	2813	3344	19%
REGIONAL SUBTOTAL:	9901165	51	127	1312	2081	4301	4800	4853	10062	10517	17071	62%
MINISTRY HEAD OFFFICE:		19	51	251	416	704	720	730	1006	1704	2193	29%
GRAND TOTAL:	9901165	70	178	1563	2498	5031	5520	5583	11068	12221	19264	58%

PPSR for Executives = 77700
PPSR for Middle Management = 4757
PPSR for Supervisory = 2063
PCSR for Clerical = 984
TSN = Targeted Staff Needs Based on PPSR
CSL = Current Staff Level
NOTE:

1) Ciskei figures are calculated on 1989 data plus 7% estimated growth
2) Transkei figures are calculated on 1988 data projected at 7% annual growth
3) Staffing figures reported in study. These numbers may differ from other sources, such as estimates used in APEX model, due to definitions of groups of staff. The study team worked closely with reporting departments to assure consistency in definitions and accuracy of data.

TABLE 6.2: SUMMARY OF ANTICIPATED CHANGES IN MIXED STAFFING MODEL

REGION	CLS	EXECUTIVE PROJECTED STAFFING IN 1993	PROJECTED INCREASE	CSL	MIDDLE PROJECTED STAFFING IN 1993	PROJECTED INCREASE	CSL	SUPERVISORY PROJECTED STAFFING IN 1993	PROJECTED INCREASE	CSL	CLERICAL PROJECTED STAFFING IN 1993	PROJECTED INCREASE	TOTAL PROJECTED INCREASE	1993 TOTAL PROJECTED STAFFING	SUM OF CSL	% CHANGE
TYPE X	20	25	5	223	308	85	725	896	171	1276	1663	387	647	2891	2244	29%
TYPE Y	20	29	9	660	737	77	2429	2424	-5	2351	2889	538	619	6079	5460	11%
TYPE Z	11	13	2	429	433	4	1147	1138	-10	1226	1347	121	118	2931	2813	4%
MININSTRY HEAD OFFICE	19	39	20	251	378	127	704	815	111	730	987	257	515	2219	1704	30%
TOTAL	70	105	35	1563	1855	292	5005	5273	268	5583	6887	1304	1899	14120	12221	16%

NOTE: CSL = Current Staff Level

6.5 Based on the assumptions of this scenario, a regional imbalance may continue. The rural areas may fail to receive the resources which will attract the out-of-school population back to school, and may therefore experience slower enrollment growth and fewer staff allocations. In addition the rural regions may lack the political clout to get a staffing growth cushion, and therefore may fail to keep up with needed staff development.

6.6 **The staffing cushion.** The mixed model assumes that the cushion effect is wiped out by the poor economy. Rather than receiving a staffing cushion, as under the optimistic scenario, in the mixed model most regions will not even be able to add staff as fast as the projected staff demands, based on enrollments, would indicate. Instead of a cushion, there is an "anti-cushion" caused by the poor economy and other factors. For example, at the middle management level, the projected staff growth between current staffing level and that in 1997, based on pupil enrollment, is 708 in the mixed model in Region Type X (Table 6.9j). Under the conditions of this model, this regional type will only be able to attain 60 % of the 425 staff needed to fill the gap between current staff levels and 1997 level. These 425 will be added at an annual rate of 85 for five years, leaving a staffing vacancy in this region of approximately 60 positions. By contrast, under the comprehensive model and optimistic scenario, Regional Type X would have a 1997 projected staffing level of 1135. (Table 6.9b). With the possibilities of a staffing cushion, the region would be able to add 365 positions in 1993, and 137 per year in the next four years to reach the targeted level by 1997. By adding a significantly larger number in the first year of growth period, the region will be able to cope with pressures of expansion and training demands more easily.

6.7 **The exodus factor.** The exodus factor may have a large impact on staffing needs, and subsequently on training needs. It is estimated that more than 3,600 persons may need to be added to staff in order to fill the gap of 1,935 positions between current staffing levels and that projected for 1993 under the mixed staffing model. This is due to the estimated exodus of about 1,700 persons from the educational bureaucracy. (See Table 6.10n for a summary of the exodus impact in the mixed model, and Tables 6.10i-l for details for each of the management levels.) It is estimated that the highest rate of exodus will be at the middle management level, with perhaps as many as one third (500) of the current middle managers leaving. This can have a major impact on management practices. In the short run a loss of this many experienced staff will create serious problems. In the long run, it will provide many opportunities for advancement to staff who have been denied. It also creates opportunities for recruitment of qualified staff from the NGO community, universities and the private

> The exodus gap under the optimistic scenario is approximately 2100 persons, meaning that over 7,000 persons may need to be hired to the system to make up the projected staffing gap of 5,010 positions. In the pessimistic scenario, the expected exodus is about 1,730, meaning that almost 3,200 persons will be needed to fill a projected staffing gap of only approximately 1,450 positions.

sector--which may enrich management and planning practices significantly.

6.8 **Training needs under the mixed model.** A summary of total training needs under the mixed model is shown in **Table 6.3**. These needs are based on the training impact assessment explained in the methodology section, as applied to the high priority needs identified during the field based portion of the study. The numbers used to state training needs refer to the number of staff who will need to participate in training events in this area. As indicated by the field study, the need to address system gaps dominates training needs. Particular attention is given to training in the area of organizational change, since it is the one area which will impact the greatest number of staff as the educational system experiences transformation. Emphasis on developing the systems necessary to plan and manage the bureaucracy is indicated not only at the "system gap" level, but also in other areas as well, including basic management and the management of supervision and inspection (SI) functions.

6.9 **Emphasis on middle management training. Table 6.3** also indicates support for the advice received during the field study that heavy emphasis be placed on providing management training for the middle management level of the educational bureaucracy. Relative to their numbers, middle managers will have more opportunities under this training model than other levels of management. This level is targeted for over a thousand "training units" during the 1993-1997 period, out of a total mid-management corps of 3,000 in 1997 (Table 6.9j), while the supervisory level has 2,415 "training units" for a 1997 corps of over 6,600 (Table 6.9k).

6.10 **Critical mass training.** Training estimates need to be modified in several ways. First, they need to reflect the requirements for developing a "critical mass" of staff in both the education bureaucracy and in training provider programs, to assure that sufficient human resources will be available to design and implement new systems, while keeping up with the challenges of managing routine education activities. (See Note 7 in the Methodological Appendix for a discussion of estimating critical mass; Table 6.15 in the Appendices provides an estimate of critical mass training needs under all scenarios.) Second, there needs to be a sustained training effort, after the critical mass phase, to maintain progress in implementing changes in individual and organizational performance. As indicated in Section 2, it is assumed in all staffing models the same amount of training needs are suggested to meet the critical mass requirements in the "system gaps" at regional and ministry head office levels, irrespective of other considerations. In other areas, the training needs reflect regional differences in current management capabilities, both with respect to training needs by functional areas, and by management level. Thus, total training needs in basic management are relatively high (in all three staffing models) because of the high need for this area of training in most of the current black departments. Training for middle level managers is relatively high in all staffing models because of the emphasis stressed by the study team, reflecting recommendations from the field interviews and from education reform projects in other countries, that training at this level is critical to the success of education reform.

TABLE 6.3: SUMMARY OF TRAINING NEEDS UNDER MIXED MODEL

FUNCTIONAL AREAS	EXECUTIVE	MIDDLE	SUPERVISORY	CLERICAL	TOTAL
	TUN	TUN	TUN	TUN	TUN
SYSTEM GAP					
Policy Analysis	11	82	24	40	158
MIS	11	107	215	207	575
M/E	11	107	215	207	574
Public Communication	11	130	158	231	529
Planning/Budgeting Link	11	130	336	137	613
Organizational Development	11	141	369	388	909
SERVICE DELIVERY					
ABE	0	0	0	0	0
Counseling	0	0	0	0	0
Mgmt Spec Services	2	57	105	0	165
OTHER					
Curriculcum R & D	2	75	127	47	252
Project Cycle Mgmt	3	69	83	27	182
Basic Mgmt	3	39	116	183	340
Performance Appraisal	2	42	169	136	349
Procurement	1	21	18	116	156
Teacher Development	2	59	239	0	301
Mgmt S I Functions	1	59	239	0	300
TOTALS:	81	1187	2415	1718	5400

TUN = Training Units Needed; i.e., number of staff needing training

6.11 **The service delivery gaps.** As indicated earlier in this report, the area referred to as "service delivery" covers counselling and adult basic education. These are service delivery areas for which the education system has service delivery responsibility but very little capability or capacity, due in large measure to funding constraints. As a consequence, alternative delivery systems have begun to emerge and have made small but significant progress in addressing some of the need, especially in urban areas. It is the Study Team's assumption that a new government will not be able to address service delivery in these two areas in any meaningful way, given the tremendous pressure for service delivery and improvement in other education subsectors. Nevertheless, in view of responsibilities for these areas, it will be necessary for special efforts to be made in developing the capacity and capability to manage the planning and oversight of service delivery being done (possibly through contracting out service delivery through NGOs), and for this reason training needs in these areas have been estimated.

6.12 **Sustainability training.** **Table 6.4** indicates the level of need for "training for sustainability" in the mixed model, including the training needed initially to facilitate the integration of current financial, personnel and procurement subsystems into common operations in all regions. The level of training for sustainability is low in all staffing models, relative to the total level of need, because of the "budget factor" as explained in Section 2. Basically this factor tries to establish a minimum annual training allotment, something no department has done well, while acknowledging limitations to training resources. While it is recommended that donors consider funding all training costs discussed in this report, at least for some initial period of time, the reality is that sooner or later the continuity of training support must become government's responsibility.

6.13 In our model the training demand needed to sustain changes has been kept low in order to facilitate future government budgeting for this need. Even with this modest level of training need, it is substantially more than is currently being provided in the existing departments. By varying the budget, a small but important impact can be made on training commitments. Increasing the training budget from 5% to 7.5% will increase the number of people who can be trained annually from its present level of 685 to 750. In regions where there is a high training need to offset historical negligence, this may be important. Thus, it may be useful to consider creating a "training contingency fund" in the ministry head office to supplement training resources in regions with high needs.

> In the comprehensive staffing model, the annual level of training for sustainability is almost 1200 persons per year, while in the selective model it drops only slightly. (See Tables 6.16a,b, and c in the Appendix of Tables.)

6.14 **Other factors which affect level of training.** The gap factor gives training priority to addressing system gaps, in order to support the development of a management system which can manage resources more efficiently and effectively than

TABLE 6.4: TRAINING FOR SUSTAINABILITY: MIXED MODEL

FUNCTIONAL AREAS	TUN	CRITICAL MASS	SUSTAINABILITY BASE	BUDGET FACTOR ADJ.	GAP FACTOR ADJ.	EXODUS FACTOR ADJ.	TRAINING NEEDS
SYSTEM GAP							
Policy Analysis	158	215	-57	-3	22	41	60
MIS	574	248	326	16	25	41	82
M/E	574	248	326	16	25	41	82
Public Communication	529	248	281	14	25	41	80
Planning/Budgeting Link	613	248	365	18	25	41	84
Organizational Development	909	248	661	33	25	41	99
SERVICE DELIVERY							
ABE	0	0	0	0	0	0	0
Counseling	0	0	0	0	0	0	0
Mgmt Spec Services	165	122	43	2	0	0	2
OTHER							
Curriculcum R & D	252	122	130	6	0	21	27
Project Cycle Mgmt	182	122	60	3	0	21	24
Basic Mgmt	340	122	218	11	0	21	32
Performance Appraisal	349	122	227	11	0	21	32
Procurement	156	122	34	2	0	21	22
Teacher Development	301	122	179	9	0	21	30
Mgmt S I Functions	300	122	178	9	0	21	29
TOTALS:	5400	2431	2969				685

has been the case in recent years. The exodus factor seeks to add training resources in regions likely to experience unusually large turnover due to staff exodus. As indicated earlier, this is a significant percentage in the upper management levels in the mixed model.

Analysis of Regional and Head Office Details

6.15 **Region Type X staffing and training needs.** To review, this regional type is characterized as follows:

Type X: High needs, mostly rural population (e.g. Northern Transvaal or Transkei); high unmet demand for educational services (primary, secondary, and adult); high backlog of demand for classrooms, teachers, and learning materials; low qualifications among the existing teacher population; high need for strengthening management capacity and capability; complex current departmental situation, that is many departments (e.g., House of Assembly, House of Representatives and/or Delegates; DET; one or more SGT education departments; one or more TBVC departments) currently operating in the region with little cooperation; relatively few training providers serving this area. The following current departments were considered similar to these characteristics, and their combined pupil and staffing populations are used as the basis for analysis: Transkei, Bophuthatswana, Venda, Ciskei, Gazankulu, KaNgwane, Lebowa.

6.16 **Staffing needs.** In the mixed staffing model, Regional Type X is likely to experience a growth of 29% over current staffing during the period 1993-1997. In terms of positions, this consists of three more executive level positions, 85 more middle management positions, 171 more supervisory positions and 387 more clerical positions, for a total growth of 647 positions. (See Tables 6.2 and 6.9n)

> There is no change in this region type in the selective staff model, but substantial change in the comprehensive model--growth of 126 %, or 2827 new positions.

6.17 **Cushion and exodus factors.** As discussed earlier, Region Type X receives no cushion effect under the mixed staffing model. It also is unlikely to have a significant exodus of staff, beyond a normal attrition rate.

6.18 **Training needs.** The total training needs during the 1993-1997 period in Region Type X is estimated to be 1,199 staff needing training, as shown in **Table 6.5**. In addition to training needs to fill system gaps, this regional type has relatively high training needs in order to meet basic management and

> A slightly smaller number, 1,072 is identified under the selective model (Table 6.14a), and 2,101 is identified under the comprehensive model (Table 6.12a).

TABLE 6.5: MIXED MODEL:
TRAINING NEEDS BY LEVEL AND FUNCTION IN REGION TYPE X

FUNCTIONAL AREAS	EXECUTIVE			MIDDLE			SUPERVISORY			CLERICAL			TOTAL
	IAF	ASN	TUN	IAF	ASN	TUN	IAF	ASN	TUN	IAF	ASN	TUN	TUN
SYSTEM GAP													
Policy Analysis	0.100	25	2	0.030	308	9	0.000	896	0	0.000	1663	0	**12**
MIS	0.100	25	2	0.070	308	22	0.030	896	27	0.030	1663	50	**101**
M/E	0.100	25	2	0.070	308	22	0.030	896	27	0.030	1663	50	**101**
Public Communication	0.100	25	2	0.070	308	22	0.030	896	27	0.030	1663	50	**101**
Planning/Budgeting Link	0.100	25	2	0.070	308	22	0.070	896	63	0.030	1663	50	**137**
Organizational Development	0.100	25	2	0.070	308	22	0.070	896	63	0.070	1663	116	**203**
SERVICE DELIVERY													
ABE	0.000	25	0	0.000	308	0	0.000	896	0	0.000	1663	0	**0**
Counseling	0.000	25	0	0.000	308	0	0.000	896	0	0.000	1663	0	**0**
Mgmt Spec Services	0.035	25	1	0.050	308	15	0.020	896	18	0.000	1663	0	**34**
OTHER													
Curriculcum R & D	0.020	25	0	0.050	308	15	0.035	896	31	0.000	1663	0	**47**
Project Cycle Mgmt	0.050	25	1	0.050	308	15	0.020	896	18	0.000	1663	0	**35**
Basic Mgmt	0.050	25	1	0.050	308	15	0.050	896	45	0.035	1663	58	**120**
Performance Appraisal	0.035	25	1	0.035	308	11	0.050	896	45	0.035	1663	58	**115**
Procurement	0.035	25	1	0.020	308	6	0.020	896	18	0.035	1663	58	**83**
Teacher Development	0.020	25	0	0.035	308	11	0.050	896	45	0.000	1663	0	**56**
Mgmt S I Functions	0.020	25	0	0.035	308	11	0.050	896	45	0.000	1663	0	**56**
TOTALS:			21			217			470			491	**1199**

NOTE:
ASN = Adjusted Staffing Need for 1993 (ex. Table 6.9)
IAF = Impact Assessment Factor
TUN = Training Units Needed; number of staff needing training

planning demands, and to integrate basic system-wide administrative functions (financial, personnel and procurement).

6.19 **Training provider environment.** While the next section provides an analysis of the training provider environment, the relatively high level of training need which will exist in Region Type X areas suggest discussion of this issue here. Special effort will be needed to strengthen training provider capability in these areas. Incentives and support will need to be provided to tertiary education institutions which may exist in these regions to develop their outreach capability to meet the needs of the education sector. In some areas the private sector has already shown an interest in working jointly with outside funding sources to develop management capacity in the education sector, and these initiatives will need further support.

6.20 **Region Type Y staffing and training needs.** To review, this regional type is characterized as follows:

> Mixed needs/mixed urban and rural (e.g Natal, PWV); some areas with high unmet demand for services and backlogs, and other areas with relatively well met needs; imbalance in terms of management capacity-- some current departments strong, some weak; less inter-departmental complexity than Type X, and some history of interdepartmental cooperation; rich training provider environment. The following current departments were considered similar to these characteristics, and their combined pupil and staffing populations are used as the basis for analysis: Delegates, DET (Natal and Transvaal), H/Assembly (Natal and Transvaal), KwaZulu, KwaNdebele, QwaQwa.

6.21 **Staffing needs.** In contrast to Region Type X, this region will have slightly lower growth under the mixed model, increasing total number of staff position by 619 over current allocations to the departments used in this regional type. While this regional type is likely to have a slightly larger pupil base, based on enrollment projections, it is likely to include departments which have historically had high staffing ratios, thus the lower rate of staffing growth.

> In the comprehensive model, this regional type would experience an increase of 1,330 staff positions; in the selective model there would be an increase of only 236 positions (Tables 6.9m and o).

6.22 **Cushion factor.** In the mixed model, there is no cushion effect, because of the poor economy. However, unlike Region Type X, where only 60% of staffing needs were met, in this Regional Type in the mixed model 100% of the projected staffing needs would be met, but without any cushion effect (Tables 6.9i-l; Tables 6.9a-d indicate cushion effect under the comprehensive model, and 6.9e-h under the selective model).

6.23 **Exodus factor.** Because of the inclusion of two former Assembly departments and the larger portion of DET in this regional type, it is anticipated that there will be a significant number of persons leaving their positions in all three models.

Approximately 800 may leave their positions under the mixed model, creating the need to fill 1,462 positions to meet a projected staffing gap of 656 (table 6.10n).

Under the pessimistic scenario 822 would leave; under the optimistic scenario 1,043 may leave (Tables 6.10o and m). If 1,043 leave, it would take 2,451 persons to fill the 1408 positions created by enrollment growth and vacancies created by exodus--a turnover of one third staff at this level.

6.24 **Training needs.** Total training needs during the 1993-1997 period under the mixed model in Region Type Y are shown in **Table 6.6.** The training needs in this regional type focus more on system gaps needs as a proportion of total training needs, than in Regional Type X, owing to better management infrastructure in this regional type.

6.25 Because of assumed increases in out-of-school populations in the urban areas, combined with a likely high exodus factor among supervisory level staff from certain departments, there is likely to be relatively high need for training in the teacher development area and in the management of supervision and inspection services. Recent initiatives to begin interdepartmental planning in these areas will facilitate getting an early start to training activities in response to these needs.

In the comprehensive model, Regional Type Y would have a total training need of 2,511 and 2,160 in the selective model (Tables 6.12b and 6.14b)

6.26 **Training provider environment.** The rich training provider environment of this regional type should make addressing the needs a relatively easy task in the urban areas. As always, the challenge will be to reach the rural areas. It is possible that the private sector may be more likely to increase its share of the "training market", given greater proximity to regions of need and potential likelihood of being able to use more efficient training technologies.

6.27 **Region Type Z staffing and training needs.** To review, this regional type is characterized as follows:

> Relatively low level of unmet demand for educational services, and relatively low population density (e.g. Cape; OFS); areas of unmet demand exist in certain areas, but relative to other regional types are relatively less; good inventory of teacher resources; relatively low demand for strengthening management capacity and capability (i.e. present management systems good); less complex departmental situation than Type Y; reasonable training provider environment. The following current departments were considered similar to these characteristics, and their combined pupil and staffing populations are used as the basis for analysis: H/Assembly (Cape and Orange Free State), Representatives, DET (Cape and Orange Free State).

TABLE 6.6: MIXED MODEL:
TRAINING NEEDS BY LEVEL AND FUNCTION IN REGION TYPE Y

FUNCTIONAL AREAS	EXECUTIVE			MIDDLE			SUPERVISORY			CLERICAL			TOTAL
	IAF	ASN	TUN	IAF	ASN	TUN	IAF	ASN	TUN	IAF	ASN	TUN	TUN
SYSTEM GAP													
Policy Analysis	0.100	29	3	0.030	737	22	0.000	2424	0	0.000	2889	0	**25**
MIS	0.100	29	3	0.070	737	52	0.030	2424	73	0.030	2889	87	**214**
M/E	0.100	29	3	0.070	737	52	0.030	2424	73	0.030	2889	87	**214**
Public Communication	0.100	29	3	0.070	737	52	0.030	2424	73	0.030	2889	87	**214**
Planning/Budgeting Link	0.100	29	3	0.070	737	52	0.070	2424	170	0.030	2889	87	**311**
Organizational Development	0.100	29	3	0.070	737	52	0.070	2424	170	0.070	2889	202	**426**
SERVICE DELIVERY													
ABE	0.000	29	0	0.000	737	0	0.000	2424	0	0.000	2889	0	**0**
Counseling	0.000	29	0	0.000	737	0	0.000	2424	0	0.000	2889	0	**0**
Mgmt Spec Services	0.020	29	1	0.035	737	26	0.020	2424	48	0.000	2889	0	**75**
OTHER													
Curriculcum R & D	0.020	29	1	0.035	737	26	0.020	2424	48	0.000	2889	0	**75**
Project Cycle Mgmt	0.050	29	1	0.035	737	26	0.020	2424	48	0.000	2889	0	**76**
Basic Mgmt	0.020	29	1	0.020	737	15	0.020	2424	48	0.020	2889	58	**122**
Performance Appraisal	0.020	29	1	0.020	737	15	0.035	2424	85	0.020	2889	58	**158**
Procurement	0.000	29	0	0.020	737	15	0.000	2424	0	0.020	2889	58	**73**
Teacher Development	0.020	29	1	0.035	737	26	0.050	2424	121	0.000	2889	0	**148**
Mgmt S I Functions	0.000	29	0	0.035	737	26	0.050	2424	121	0.000	2889	0	**147**
TOTALS:			21			453			1079			722	**2276**

NOTE:
ASN = Adjusted Staffing Need for 1993 (ex. Table 6.9)
IAF = Impact Assessment Factor
TUN = Training Units Needed; number of staff needing training

6.28 **Staffing needs.** This regional type would experience the lowest staff growth rate of any regional types under all staffing models. In the mixed model it would have an increase of 118 staff positions, with the largest increase occurring in the clerical level, and a loss of positions at the supervisory level, as seen in **Table 6.2** earlier.

In the comprehensive model, Regional Type Z would experience an increase of 252 staff positions; in the selective model there would be an increase of only 36 positions.

6.29 **Cushion factor.** Because of its relatively low population and enrollment, Region Type Z would experience the least growth of any regional types due to the cushion effect--a projected staff increase of 118 positions (Table 6.9n). In the comprehensive scenario, the projected increase over the five year period would be 252, and under the selective model, an increase of only 36 (Tables 6.9m and o).

6.30 **Exodus factor.** The exodus gap in Region Type Z is estimated to be 480 in the mixed model (Table 6.10n). This is a significant amount, and is due to the high percentage of Assembly and DET staff.

6.31 **Training needs.** Total training needs for Region Type Z in the mixed staffing model are for approximately 1,000 persons to receive training during the 1993-1997 period, as shown in **Table 6.7**. Because of the assumed high level of management competence in this regional type, most training needs are likely to be in the areas of system gaps.

6.32 **Ministry head office staffing and training needs.** The staffing needs of the ministry head office, as explained in the methodology section, have an indirect relationship to pupil enrollment, and are based on an assumption that most of the operational management needs of the system will be delegated to the regional levels. However, in view of the expectations regarding policy changes and improved system performances, staff needs at the ministry head office are likely to be relatively constant during the transformative years. Consequently, there are no assumed staffing or training level changes in the ministry head office under the three staffing models. The projected staffing needs of the four management levels may be seen in **Table 6.2**. It is possible that staffing projections in the latter two categories may decline as administrative systems become routinized across all regions. The relatively large increase in staffing is due to the need to establish new planning and management systems throughout the education sector in order to be able to assure transformation of the sector in ways that implement fully and irreversibly new principles of operation.

6.33 **Training needs.** The total training needs of the head office during the period 1993-1997 are shown in **Table 6.8** and indicate the heavy emphasis on overcoming system gaps, as well as delegated responsibilities to regional offices in other areas.

TABLE 6.7: MIXED MODEL:
TRAINING NEEDS BY LEVEL AND FUNCTION IN REGION TYPE Z

FUNCTIONAL AREAS	EXECUTIVE			MIDDLE			SUPERVISORY			CLERICAL			TOTAL
	IAF	ASN	TUN	IAF	ASN	TUN	IAF	ASN	TUN	IAF	ASN	TUN	TUN
SYSTEM GAP													
Policy Analysis	0.100	13	1	0.030	433	13	0.000	1138	0	0.000	1347	40	**55**
MIS	0.100	13	1	0.070	433	30	0.030	1138	34	0.030	1347	40	**106**
M/E	0.100	13	1	0.070	433	30	0.030	1138	34	0.030	1347	40	**106**
Public Communication	0.100	13	1	0.070	433	30	0.030	1138	34	0.030	1347	94	**160**
Planning/Budgeting Link	0.100	13	1	0.070	433	30	0.070	1138	80	0.030	1347	0	**111**
Organizational Development	0.100	13	1	0.070	433	30	0.070	1138	80	0.070	1347	0	**111**
SERVICE DELIVERY													
ABE	0.000	13	0	0.000	433	0	0.000	1138	0	0.000	1347	0	**0**
Counseling	0.000	13	0	0.000	433	0	0.000	1138	0	0.000	1347	0	**0**
Mgmt Spec Services	0.020	13	0	0.020	433	9	0.020	1138	23	0.000	1347	0	**32**
OTHER													
Curriculcum R & D	0.020	13	0	0.035	433	15	0.020	1138	23	0.000	1347	47	**85**
Project Cycle Mgmt	0.000	13	0	0.020	433	9	0.000	1138	0	0.000	1347	27	**36**
Basic Mgmt	0.000	13	0	0.020	433	9	0.020	1138	23	0.035	1347	47	**79**
Performance Appraisal	0.020	13	0	0.020	433	9	0.020	1138	23	0.020	1347	0	**32**
Procurement	0.000	13	0	0.000	433	0	0.000	1138	0	0.035	1347	0	**0**
Teacher Development	0.020	13	0	0.035	433	15	0.050	1138	57	0.000	1347	0	**72**
Mgmt S I Functions	0.000	13	0	0.035	433	15	0.050	1138	57	0.000	1347	0	**72**
TOTALS:			9			245			466	0.00		337	**1057**

NOTE:
ASN = Adjusted Staffing Need for 1993 (ex. Table 6.9)
IAF = Impact Assessment Factor
TUN = Training Units Needed; number of staff needing training

TABLE 6.8: MIXED MODEL: TRAINING NEEDS BY LEVEL AND FUNCTION IN MINISTRY HEAD OFFICE

FUNCTIONAL	EXECUTIVE			MIDDLE			SUPERVISORY			CLERICAL			TOTAL
AREAS	IAF	ASN	TUN	IAF	ASN	TUN	IAF	ASN	TUN	IAF	ASN	TUN	TUN
SYSTEM GAP													
Policy Analysis	0.100	39	0	0.100	378	38	0.030	815	24	0.000	987	0	**66**
MIS	0.100	39	0	0.100	378	38	0.100	815	82	0.030	987	30	**153**
M/E	0.100	39	0	0.100	378	38	0.100	815	82	0.030	987	30	**153**
Public Communication	0.100	39	0	0.070	378	26	0.030	815	24	0.000	987	0	**55**
Planning/Budgeting Link	0.100	39	0	0.070	378	26	0.030	815	24	0.000	987	0	**55**
Organizational Development	0.100	39	0	0.100	378	38	0.070	815	57	0.070	987	69	**168**
SERVICE DELIVERY													
ABE	0.000	39	0	0.000	378	0	0.000	815	0	0.000	987	0	**0**
Counseling	0.000	39	0	0.000	378	0	0.000	815	0	0.000	987	0	**0**
Mgmt Spec Services	0.020	39	1	0.020	378	8	0.020	815	16	0.000	987	0	**25**
OTHER													
Curriculcum R & D	0.020	39	1	0.050	378	19	0.030	815	24	0.000	987	0	**44**
Project Cycle Mgmt	0.020	39	1	0.050	378	19	0.020	815	16	0.000	987	0	**36**
Basic Mgmt	0.020	39	1	0.000	378	0	0.000	815	0	0.020	987	20	**21**
Performance Appraisal	0.020	39	1	0.020	378	8	0.020	815	16	0.020	987	20	**44**
Procurement	0.000	39	0	0.000	378	0	0.000	815	0	0.000	987	0	**0**
Teacher Development	0.020	39	1	0.020	378	8	0.020	815	16	0.000	987	0	**25**
Mgmt S I Functions	0.020	39	1	0.020	378	8	0.020	815	16	0.000	987	0	**25**
TOTALS:			29			272			399			168	**868**

NOTE:
ASN = Adjusted Staffing Need for 1993
IAF = Impact Assessment Factor
TUN = Training Units Needed; number of staff needing training

6.34 **Summary.** This section has attempted to use a dynamic model to show the conversion of qualitative expressions of training needs to quantitative indicators which provide guidance to questions of how many, in what content areas, at what level. This model will allow planners and others to change assumptions and gauge the impact on other factors. By tracing the impact of enrollment projections through 1997 under a mixed scenario, we have estimated staffing needs to be approximately 1,900 new positions. However, due to an exodus factor, as many as 1,730 persons may choose to leave the new ministry of education, in which case it may take over 3,600 new staff appointments to fill all positions in the four levels of management in all regional offices and the head office.

6.35 During the 1993-1997 period, as many as 5,400 persons may need training in the areas identified in the field study. Approximately 2,400 may receive training in high priority areas, to constitute a critical mass of training providers and ministry of education staff in these areas. A heavy emphasis of critical mass training (40%) would be at the middle management level. In order to assure integration of new systems with general operating procedures, and to integrate common systems in basic management areas across all regions, approximately 685 persons a year may be engaged in training for sustainability following the initial year of critical mass training.

6.36 The next section is concerned with the capacity and capability of the training provider environment in South Africa to meet these training needs.

Section 7:
EXISTING TRAINING PROGRAMS for EDUCATIONAL PLANNERS AND MANAGERS: ASSESSMENT and NEEDS

Assessment of Existing Programs

7.0 **Existing training providers/programs.** Training for educational planners and managers in the current departmental structures is made available through numerous formal, nonformal and informal programs and opportunities. These "providers" constitute a starting point to consider how training needs identified in Sections 5 and 6 might be met. General categories of providers are:

a. formal department-based training programs, such as the defunct "Top-Down" program of DET;

b. informal department-based training, mainly through on-the-job mentoring by senior officials;

c. non-education-specific programs such as those offered by CFA and Public Service Commissions of TBVC and SGTs;

d. private sector companies and/or consultants, usually in conjunction with the installation of operational systems such as PERSAL;

e. tertiary education institutions, including universities, technikons and teacher training colleges, and special entities based therein, such as RIEP (Research Institute for Education Planning, University of OFS);

f. the non-governmental sector, in particular, organizations such as TOPS, READ, CASME and IEB, which are focused on school management and other professional concerns .

7.1 **General Characteristics of Existing Training Programs**. Existing training providers offer limited capacity and capability for addressing the needs identified in this report. Limitations are the result of a lack of resources and historical enmity between the apartheid government and most universities and NGOs. This assessment is based on departmental interviews, the independent knowledge of Study Team members, and numerous other experts, as reported in various analyses (Bristol University: 1991; NEPI: 1992; University of the Orange Free State: 1991; USAID, Primary and Tertiary Education Sector Assessments: 1992; van Dyk: 1992; Walker: forthcoming; Ward: 1991). Limitations in capacity are in part due to the residential nature of many of the programs. Those which are available on a "distance education" basis lack appropriateness to deal with the challenges of restructuring a new educational system.

7.2 Other general characteristics of the current context and content of training for education planners and managers include: lack of a national strategy for dealing with the sector's management and planning training needs; the menu-driven nature of most formal training programs; astonishingly low levels of financial resources for training in departmental budgets, and consequently, very little of a training infrastructure on which to build future training programs; and, general isolation of NGOs and tertiary education institutions (including teacher training colleges and university based faculties of education) from active involvement in meeting training needs. These characteristics are analyzed in more detail in the following paragraphs.

Capacity--A Key Issue:

7.3 **The issue of capacity.** As demonstrated in Section 6 and **Table 7.1,** the aggregate demand for training a critical mass of managers and planners is in excess of the present capacity of formal training programs. While the annual training for sustainability is less, and may seem to be within current capacity, it must be anticipated that most government departments -- not just education-- will be experiencing a need for training, thus the current capacity needs to be expanded. The data in **Table 7.1** is based upon information contained in reports cited earlier, as well as data collected in this study. It is likely that the capacity of the private sector is underreported since the study from which this data is taken had a different focus. Nonetheless, the message is clear: expansion of training capacity to serve all levels of management is a high priority. In particular, training capacity for the executive and middle management levels are in critically short supply. Insofar as leadership is seen as the main factor in determining the success of education reform programs worldwide (Rondinelli: 1990 p.93) and leadership competence is the result of appropriate training, the urgency of creating training capacity for the executive and middle management levels in a new system is apparent. The issue of capacity also has particular regional needs, as indicated in the discussion of the training needs of Regional Type X in Section 6. It is easy to find or develop excellent trainers in Pretoria, Johannesburg, Cape Town and Durban; finding them easily available to participate and guide an action-training approach in Venda or the remote areas of the Transvaal or Cape Province is very problematic. Part of the strategy of developing training capacity should be to develop it at a regional basis, so that there is frequent, rich interaction between supply and demand.

7.4 **Tertiary education providers.** Perhaps most depressing in an assessment of training providers is the incapacity--based in large measure on questionable responsiveness and commitment--of the tertiary education system to provide training for the planning and management needs of the educational system. At present, as far as this study was able to establish, only RIEP has a training program aimed specifically at meeting the planning and management needs of black educational professionals from all departments. Its capacity is limited to about 130 per year, on a residential basis. Three of the 21 universities have provisions for educational planning and management at the undergraduate level. Eighteen postgraduate courses -- 17 on a residential basis are "on the books". Fourteen university-based diploma courses are also approved. Technikons and teacher training colleges (TTCs) have

done little to develop capacity to meet current needs. One technikon offers a course in educational management. It is estimated that approximately 20% of the 101 TTCs have a course in education management, but from reports which the Study Team had access to, almost all training capacity of the TTCs is dedicated to meeting needs of institutional-based administrators and teachers. That is an understandable priority, but the need for developing capacity above the school-based level to plan and manage the coordination and use of resources should be coordinated with training aimed at the school-based level. The lessons learned from many education reform projects worldwide is that the failure to do so has led to ineffectiveness, inefficiency and failure (Rondinelli: 1990). South Africa's new educational system cannot afford to ignore these lessons.

Table 7.1

Current Capacity of Providers
by Levels of Management

Providers	Executive	Middle Management	Supervisory	Clerical	Total
TERTIARY					
University[1]		18 courses[2] 180	17 courses[3] 170		250
Technikon[4]			1 course[5] 10		10
TTC[6]			28 courses 185		185
NGOs[7]			34	51	85
GOVERNMENT AGENCIES					
Education Departments[8]		170	170		340
CFA/PSC[9]	17	84	84	84	269
CESA		65	65		130
PRIVATE SECTOR[10]	5	17	34	200	256
OTHER[11]	6	34	51		91
TOTAL	28	550	803	335	1716

7.5 **Training by government agencies.** The capacity of government agencies to train planners and managers is extremely limited. The College of Education for South

Africa (CESA-- formerly CEFT, the College of Education and Further Training) is operated as a distance-education training institution by the House of Assembly. Since early in 1992 it has been opened to educators from all departments. However, its management department only has a capacity of approximately 130 trainees per year. The training programs run by the Commission for Administration and the Public Service Commissions of the homelands also have limited capacity. A common message from all departments of education was that in-house training programs for head office staff have essentially been eliminated by recent budget cuts.

7.6 **Non-governmental organizations.** Strategies of opposition to current and past government educational policies by non-governmental organizations (NGOs) have used training as a tool, but the targets of training have been staff at the institutional level. However, "the bureaucracy" has not been seen as a training target, thus a capacity to train head office staff has not been developed by these organizations. The potential is substantial, given additional resources. It is estimated by some that several thousand staff at the institutional level receive training from organizations such as TOPS and ITEC, and hundreds more are being served in teacher training centres being operated by teacher organizations, outside the support system of government.

7.7 **Private sector.** It is difficult to assess the capacity of the private sector since it has no "committed" infrastructure specifically for the education sector, as in the case of tertiary education with its course structure. Suffice it to say, the private sector has the capacity to respond to training needs at all levels, within certain functional areas. At present, it is the main source of training committed to the introduction of the PERSAL system of personnel administration in certain education departments. It was also the primary source of management training in the "Top-Down" program of the DET. In short, private sector capacity is best described as "elastic", with elasticity directly related to budget resources.

7.8 To review, the capacity of current providers to address the quantity of training needs identified is limited. The limitation is a function of the lack of resources dedicated to training, and is a result of historical enmity between the apartheid government and most universities and NGOs. The potential of these providers, and the private sector, to expand capacity to meet projected needs is considerable, assuming the availability of resources to finance expansion. However, the issue of expanding capacity must also be considered in the light of the appropriateness and cost effectiveness of training being offered.

Training Appropriateness and Cost Effectiveness Issues

7.9 **Appropriateness.** The primary orientation of most training programs is not suited to introducing major structural changes in education, including the development and maintenance of a nonracial, nondiscriminatory, democratic, unified system of education. The non-education specific management training programs of the CFA (Commission for Administration) and the Public Service Commissions of the SGTs tend to reflect a bureaucratic orientation that is incompatible with system-wide change and a nonracial, democratic commitment. The educational planning and management programs which are university-based tend to be excessively academic, and serve a

purpose of credentialing rather than providing "crash training" in critical areas needed under a new dispensation. Many faculty members in the English-medium, historically white universities have had little direct contact with government education departments in recent years and, consequently, have no direct knowledge of operations needed to enable them to be credible, effective trainers. Faculty members from Afrikaans-medium institutions which have done consulting work with present departments, may have problems of political acceptability to officials in a new dispensation. Even those programs which proclaim a practical, applied orientation, such as CESA, rely on learning modes that emphasize memorization of management techniques rather than the development of skills in analysis and problem solving. Training programs run by the private sector tend to address very specific needs, such as skill development related to new operational systems, and are generally appropriate and effective, and should be considered for a greatly expanded role in training officials in a new system.

7.10 **Cost-effectiveness.** The Study Team did not have sufficient time to develop the data necessary to analyze cost-effectiveness of many of the existing programs. Other studies (indicated above) have reviewed some of these programs with this characteristic in mind, and the conclusion seems to be that cost-effectiveness has not been an important consideration in the design and operation of programs. Many of the government run training programs operate without demonstrable sensitivity to internal efficiency; anecdotal comments about lax office hours and low training loads are common.

7.11 In contrast, some of the training programs operated by NGOs seem to have a high degree of sensitivity to cost-effectiveness, reflecting, undoubtedly, the tight financial environment in which they operate. The Teacher Opportunity Programmes (TOPS) for example, provides training for approximately 6,700 teachers per year, on an annual operating budget of R 8.1 million. The quality of this training is reported to be quite high, and has gained the support of DET and teachers unions. The READ Programme's College Project reaches over 3,000 lecturing staff at teacher training colleges, on an annual budget of approximately R 400,000.

Other Issues concerning Training Providers

7.12 **Lack of a national training strategy.** There is not a coherent, comprehensive national training program strategy for education planners and managers. This situation reflects the fragmented structure of education in South Africa, despite the enactment of legislation which has brought all teachers under standard conditions of service and qualification requirements. However, the lack of such a strategy, within the historical context of apartheid, may actually be an advantage in that it may be possible to develop and implement a national training strategy without having to overcome or displace an existing structure, with potentially inappropriate values and practices. Considerations for the development of such a strategy will be discussed in the last Section of this report.

7.13 **Diversity of existing nonformal programs.** Another potential virtue of the current situation regarding training for education planners and managers is the diverse range of providers, as seen in the first paragraph above, and the variations in the nature of programs they provide, notwithstanding the concerns expressed in the preceding paragraphs. Insofar as a major tenet held by all parties concerning education under a new dispensation is that it reflect regional needs and diversity, the lack of a tightly structured training system, and the existing diversity of providers bodes well for developing flexible, responsive training capability. Existing diversity could be a major asset if the sporadic, uncoordinated and menu-/supply-driven nature of these programs can be replaced by programs which are needs-driven, responsive to national and regional goals, and coordinated in content from the institutional level to the head offices.

7.14 **Training orientation.** The predominant form of training for head office staff is an informal, on-the-job mentoring process combined with trial-and-error and intuition as the primary modes of learning. This is not to suggest that other orientations do not exist; they do, as indicated above, but in terms of shaping behavior and affecting organizational outlook, the informal process is reported to have the most impact. In part, this situation reflects the tight financial constraints all departments have faced in recent years. Most head office staff have not had opportunities to participate in structured training programs because of budget constraints. Yet, the processes of organization and staff changes have gone on, with most training being done on-the-job. Given the goal of increasing racial, ethnic and gender diversity at head offices under a new dispensation, it may be unlikely that this orientation can continue or be as successful. Careful thought will need to be given to introducing other training orientations in order to assure greater responsiveness to contextual and content needs.[12]

7.15 **Declining emphasis on training.** There is a declining emphasis on training in most departments, a trend exacerbated by current "rationalisation programmes." In some, such as the tricameral departments, rationalization is driven by declining student population, which leads to declining budget and staff. In other departments, such as in TBVC and the SGTs, rationalization is driven by financial constraints due to the poor economy. This has caused budget pressures in all categories of expenditures, and training for head office staff has been among the first areas to be effected. For example, in Ciskei, where significant effort is being expended to introduce new planning and finance systems, only R39,000 is currently budgeted for training of head office staff. Under this limitation it is unlikely that the new systems will be implemented effectively since needed training is not affordable.

7.16 **Top-down character of training.** Existing training programs, in most cases, are "top-down" in character with little evidence of intended "cascading effects" in practice, or of team-building approaches to management training and development. This characteristic reflects the authoritarian nature of bureaucracy which has pervaded government service during the last forty years, according to most observers. Symbolic of this characteristic is the "Top-Down" management training program developed and introduced in the DET. The very name of the program signalled to black principals and supervisors an inherent management orientation, and limited the legitimacy and

acceptance of the training program. Many training programs--formal, nonformal or informal--governmental, NGO or tertiary education based--come into being on the basis of assumed needs, not on the basis of needs assessments. Few, if any, departments have the training infrastructure or resources to develop training programs for current and future planners and managers using professionally accepted practices of planning training activities for adults. What this situation indicates is that development of a needs-based orientation, and a marked shift away from top-down, supply driven planning of training, will be a critical priority in implementing a training approach for the education sector under a new dispensation.

7.17 **Emphasis on training for school-level administrators.** Excluding training in the operation of management systems at departmental level (such as finance and personnel), there is an increasing focus on professional training at the school level with particular attention to school managers/principals. This emphasis can be found among programs sponsored by government and non-governmental organizations, and across all population groups. The emphasis is a welcome reflection of increased awareness that the success of South Africa's educational future depends upon transforming all schools into effective and efficiently managed learning centers. However, this condition will not occur if head offices are not similarly transformed, and such transformation will require more emphasis on training for planners and managers.

7.18 **Some departmental variations in existing training programs.** The description and analysis in the preceding paragraphs may mask some important distinctions among the training programs in existing departments. There are significant differences among regions, and among departments within the same region. The primary dimensions of these differences are: (a) the capacity to respond to training needs; and, (b) the appropriateness and relevance of training. Not surprisingly, the availability of resources seems to be the most important factor in explaining differences. Generally, the historically better resourced departments have been able to support considerable investment in training, and in the process have been able to develop and utilize regional resources effectively. An example is the Orange Free State Department of Education and Culture. Within the Natal region, there is considerable difference in capacity to respond to training needs; KwaZulu has the greatest needs and least capacity, while the departments of the Houses of Assembly and Delegates have substantially more resources and capacity and fewer needs.

Needs of Training Providers

7.19 **Overview of training providers' needs.** This brief assessment of the training providers and the programs they offer provides insight into the needs which training programs have, if they are to have a role to play in addressing the needs of education planners and managers under a new dispensation. Basically, three basic types of needs exist:

a. strategic design and management gaps in what might be considered a national training system for the education sector;

b. gaps in the service delivery capability of training programs;

c. gaps in the content of training programs.

7.20 **Gaps in strategic design and management.** Given the training needs that exist in the education sector, it is useful to consider them within the potential context of a national training "system". Such consideration brings into sharp focus strategic design and management gaps which exist in this environment. Briefly, these gaps include: (a) lack of a goal-setting capacity related to training needs at national and regional levels; (b) lack of a strategy to meet training goals; (c) lack of capability to plan, conduct and evaluate training based on appropriate principles of adult learning theories; (d) lack of mechanisms which link providers and staff needing training and assure effective coordination and accountability on a regional and sub-regional level; (e) lack of mechanisms to link training activities and outcomes to performance goals and incentives at regional, sub-regional, institutional, and individual levels; and, (f) lack of mechanisms to promote and monitor research and development of education training.

7.21 **Gaps in training service delivery.** Assessment indicates that in order for appropriate training to reach education planners and managers, two main service delivery gaps will need to be addressed: (a) the capacity to provide necessary training on an intensive, "limited residence" basis; and, (b) the capacity to reach trainees through distance education programs "that work". The former is concerned with training program designs which are responsive to the work demands of officials. Study Team members were repeatedly advised by department officials to recommend the design of training programs which working officials can participate in without taking months of leave from work. There are numerous examples of such design throughout the world, with training provided on an intensive weekend or week-long basis, or on an evening basis. Such designs require flexibility and special training on the part of training providers in order to be creatively responsive and effective. Concerns expressed about distance education programs focus on the feelings that they do not work; that is, they do not provide learners with necessary skills and support to apply materials presented in correspondence courses. Furthermore, such training is aimed at individuals, rather than organizations, and training with this orientation seldom results in sustainable organizational change. However, departmental officials recognize that what is needed, generally, is change at both the individual and organizational levels, and distance education programs presently lack such an orientation. Strengthening regional providers may be an effective and efficient way of addressing this need.

7.22 **Content gaps.** The third type of training gap concerns the content of present training programs. As might be inferred from the assessment of training needs of planners and managers outlined in Section 5, many of these needs persist, in part, because no one is addressing them. At present, there are no training providers in South Africa, in any of the categories outlined above, which provide training in the following critically needed areas: (a) policy analysis; (b) design and implementation of educational management information systems, and monitoring and evaluation systems; (c) the linkage of planning activities to program budgeting;

(d) organizational change techniques specific to the education sector; (e) design, implementation and evaluation of system-changing educational projects; and, (f) system wide approaches to curriculum research and development.

7.23 **Prospects of addressing gaps.** Prospects for addressing these gaps are improving, but whether they materialize depends on which scenario unfolds. Many educational professionals recognize the needs and are developing proposals for consideration by international and domestic donors. Donors are considering how they will contribute to efforts to strengthen performance in the various subsectors of education. Options concerning broad intervention strategies are discussed in Section 9. In terms of addressing certain content gaps, it is suggested that steps be taken to initiate the development of a critical mass of training providers in high priority areas, in order to build local capacity to meet future needs.

7.24 **Critical Mass training of training providers.** It was suggested in Section 6 that training of trainers in "systems gaps" be considered part of the training strategy to develop a critical mass capable of designing needed changes and introducing them to the new education system. It was also suggested that the process of design and introduction of new systems be grounded in an action-training approach in order to maximize organizational and individual learning, and shorten the time needed to achieve sustainable organizational performance in these areas. Again we face the question, how many trainers constitute a critical mass in these areas? The answer could be approached from a number of perspectives; we have chosen to guide the formulation of an estimate based on the assumption that the needs for diversity in a new system will be high, and that it is better, therefore, to start with a larger critical mass of trainers than a smaller one. This action will support the development of seminal training capacity in critical areas in a number of locations, therefore increasing the likelihood of design diversity and response capability within the educational system. For our purposes we have considered the establishment of critical training mass in eight training entities in each functional area as addressing an initial need for diversity.

7.25 In training and education fields there is a general rule of thumb that, at a minimum, 4-6 persons are needed to develop an institutionally-based instructional capacity grounded in limited amounts of field research or consulting, for each education or training target group. Considering the notion of diversity noted in the preceding paragraph (eight entities) suggests that in each of the six system gap content areas (policy analysis, monitoring and evaluation, management information systems, planning-budgeting linkages, public communications and organizational change) there should be a critical mass of 48 trainers to be added to the critical mass being trained for the working within the bureaucracy.

7.26 **Sustaining the critical mass.** The issues of sustaining a critical mass of trainers are different than those concerned with sustaining the effect of training a critical mass in the bureaucracy. It is assumed that the budget support necessary to sustain these trainers will exist, since there is likely to be a demand (including the needs of other government departments with similar system gaps) which exceeds the likely training capacity of this group, and it is assumed that there will be sufficient

training resources even under a pessimistic scenario and selective staffing model to cover the recurrent costs of the critical mass trainers. The issue of the exodus factor is discounted on the assumption that if a trainer trained as part of the critical mass for training providers leaves his or her position, the probability is that he or she will still be available as a trainer, even in a part time role. It will be necessary for training entities to plan their human resource development in such a way that the initially trained critical mass can be sustained, but the likelihood for doing so is greater than in the bureaucracy, and for this reason there is no additional effort anticipated at this time.

7.27 **Other content gaps.** It is the judgement of the Study Team that there is a shortage of appropriately trained trainers in all of the other content areas mentioned in Section 5. It is also the judgement of the team that the knowledge and skills needed to address these needs already exist in South Africa, and if the budget resources are made available to hire trainers in these areas, the market place will provide them. This is not to say that there is not concern for assuring that planning for the development of these training resources should not be done within the context of national regional coordination. Nor is it to imply that there are not serious concerns about the need for developing and implementing quality control standards in these areas, if progress towards achieving national education goals is to be achieved. For example, a major area of need is that regarding curriculum research and development. Some may even argue that this area should be included in the "system gap" list and be a focus of developing a critical mass of trainers to guide the development of curriculum research and development under the new system of education. However, it is the contention of the study team that the basic competency for this area, and all the "Other" areas in the list of functional areas in Section 5, does exist in South Africa, and if the gaps in the strategic design and management of training activities (identified in Para 7.20 above) are addressed appropriately, the system will produce the trainers needed to address the "other" areas. For these reasons, this report does not address these areas of need.

Review of training provider issues and needs.

7.28 **The strengths.** South Africa has a rich training provider environment. No other country in Africa has the diversity and quality which is present in South Africa's training community. Despite all their shortcomings, its universities are considered to be the best on the continent. The education related NGO community, though harassed through the nightmare of apartheid, is vibrant, skillful and diverse. Similarly, the private sector has, within the African context, a unique capacity of technological applications with which it can assist the education sector in adapting in order to improve the quality of education for all South Africans.

7.29 **The needs.** Nevertheless, both the NGO community and the universities show signs of the years of isolation and they need assistance in developing competence in certain critical areas if they are to be appropriate providers of training and guidance to a new educational system. Training departments within government agencies have been ravaged by economic pressures and have failed to provide training leadership in the education sector. The same economic pressures, together with other

constraints, have prevented the tertiary education sector from developing responses to the needs of the education community. All training providers need assistance in expanding capacity to meet anticipated training needs. All need assistance in developing appropriate and effective training programs.

7.30 **The gaps in meeting needs.** When viewed in a broad context, as the Study Team has tried to do, three major gaps can be seen which need to be addressed if the training providers' individual and collective needs concerning capacity and capability are to be met. These are:

a. gaps in strategic design and management of what might be considered a national training system for the education sector;

b. gaps in the service delivery capability of training programs;

c. gaps in the content of training programs which address system gaps in the bureaucracy.

In this section we have identified actions which could be taken to address the gaps in key areas of content--primarily by creating a critical mass of trainers, in conjunction with developing a critical mass of education planners and managers. In other content areas, the needed response from training providers will evolve when actions are taken to address the gaps in service delivery and, more critically, the gaps in strategic design and management of a national training system for the education sector. These issues are addressed in the next section.

ENDNOTES

1. Assumptions: University Postgraduate courses are for Middle Management level staff; Undergraduate and diploma are for Supervisory level staff; while typical course enrollment is assumed to be 30, it is also assumed that only ten of these are from current head office staff.

2. Per NEPI Working Paper by Mohamed and Johnson.

3. Ibid.

4. Assumption: Technikon undergrad and diploma courses are for supervisory level.

5. See Methodological Appendix, Note 3 regarding enrollment assumption.

6. Teacher Training Colleges: assumptions - (a) courses are for Supervisory level personnel; (b) number of courses is extrapolated from NEPI/Mohamed andJohnson study; (c) assumes average course enrollment is 20 persons and of this number one third are current head office staff.

7. The study did not indicate any current head office personnel enrolled in courses being offered by NGOs for the education sector. Nevertheless, we assume that at least two persons at the supervisory level and three persons at the clerical level, per department, are participating in NGO sponsored courses per year.

8. It is assumed that approximately 10 persons per year per department at the middle management and supervisory levels receive on-job-training. This assumption is based on reports from all departments that funding for most other training opportunities has ended.

9. It is assumed that middle management, supervisory and clerical staff have access to one course per year, per level, provided by the Commission for Administration or a Public Service Commission. It is further assumed that their rate of participation in such courses is proportional to other government departments; that is, "education slots" are approximately 15% of the assumed enrollment of 40 per course. It is assumed that each education department in the TBVC and SGTs sends 6 persons to such courses per level, and in the RSA, the DET, HD, HR, and HA each have six slots per level.

10. It is assumed that the private sector is engaged in providing training to education head office staff through various contracts. For example, a private firm is training staff in several departments concerning the use of PERSAL, and the numbers shown here reflect an estimate of that effort.

11. Although there is no specific data in this category, it is assumed that there is a "trickle" of officials from education departments who have access to various international training opportunities. For example, a group of middle management officials from DET participated in a study tour of education departments in the United States last year. The numbers shown here reflect an estimate of that trickle. Clearly, many more individuals from NGOs, universities and other education related organizations are involved in such training, and an estimate of that number might be a more appropriate measure of capacity.

12. For a discussion of appropriate training orientation, see Lynton and Pareek: 1990; Brinkerhoff: 1991, p. 156 ; and Kerrigan and Luke: 1987, p. 161.

Section 8:
PREREQUISITE CAPACITY BUILDING REQUIREMENTS

8.0 **Identifying prior capacity building activities.** An emergent theme throughout this report and throughout the study team's interaction with department personnel and others was the need to initiate certain activities in order to assure the relevance and sustainability of training. Certain elements of this theme have already been made clear:

a. creating "systems" which fill the identified "system gaps", both in the education planning and management bureaucracy and in the training provider environment, and which are necessary conditions if transformation of the education system is to be achieved; and

b. utilizing a design and implementation strategy to fill the system gaps through action-training for a critical mass of staff (future education ministry officials and training providers) who will subsequently be responsible for managing key aspects of the education bureaucracy, and for providing training to sustain system changes.

Other elements which have been implied or assumed include the following, which are discussed in further detail below:

c. structural transformation of the education system,

d. transforming the management culture in the educational bureaucracy,

e. coordinating and/or integrating basic management support systems, and

f. creating capacity to manage long term human resource development, including training as described in this report.

8.1 **Transforming the structure.** The restructuring of the present pattern of racially, ethnically and regionally defined departments into a network of regional education authorities under the policy guidance of a national department of education is a necessary but not sufficient condition for transformation of the system. A perception which repeatedly emerged from meetings with officials in individual departments concerns the extent to which attitudes of managers had been influenced by the current system structure. This was to be found not only in the assumption of future leadership roles in the officials of the historically more privileged departments, but also in the assumption on the part of many officials in the more impoverished departments that the expertise required for a future system resides primarily in the privileged sector. These assumptions are counterproductive to efforts to create a new educational dispensation. They fail to recognize that in all departments the road to management positions has been built largely on criteria centered on political loyalty, rather than on professional competence. These assumptions nurture the continuation of a culture of dependency rather than empowerment and equality. While there may

be training efforts to address this attitudinal problem, unless the problem is tackled through a combined effort of changing structure and management culture, training will achieve very little. Merely restructuring the system by drawing new boxes and lines on an organization chart, without addressing the issues implied in these assumptioms, leaves open the strong possibility that the dominant mode of management in all education departments-- which is essentially authoritarian, hierarchical, non-consultative and non-participatory-- will permeate new structural arrangements and thus reproduce the current pattern of attitudes. This means that structural transformation must be accompanied by aggressive strategies designed to transform the management culture.

8.2 **Transforming the Management Culture.** While most departments have adopted the rhetoric of "management" in preference to the older "administration" rhetoric, the actual implementation of modern management practices is unevenly developed among the different departments. Training and support systems to ensure that newer, "contingency-based" management styles are implemented at all management levels are very limited throughout the education sector. Worldwide experience suggests that contingency-based management culture is more appropriate for the introduction of educational innovations than the prevailing culture in South Africa (Brinkerhoff: 1992; Rondinelli: 1991). This suggests that in order to introduce successful educational innovations, the management culture of the educational sector will need to be transformed.

8.3 There are a number of capacity building issues implicit in this need. Firstly, the leadership for transforming the management culture of the new educational system needs to have a clear vision of the culture it wishes to establish, and needs to have clear language and symbols about the values and principles which the new culture will transmit. It also needs to have access to experience in managing large scale organizations, and managing organizational culture within this context. Much of the practice of leadership by those who are likely to lead the new educational system has been developed around the politics of confrontation and opposition. Leadership has been limited to managing relatively small organizations. For some potential leaders, there will need to be a transformation in management culture from one which was appropriate for confrontation and opposition to one which is appropriate for discharging responsibility for implementation of policies through complex organizational structures, with adverse management subcultures. For some potential leaders who may be part of the current educational system, there will need to be a transformation in management culture from what has been essentially an authoritarian, non-participatory mangement culture to one based on different values and principles. Taken together, this suggests a prerequisite capacity building requirement around the issue of leadership with a shared vision and requisite experience, as a basis for transforming the management culture of the new educational system.

8.4 Secondly, capacity in the form of **support systems and training programmes** must be developed in a manner which ensure that they do not simply reproduce existing unequal patterns of privilege and power. This will mean reduction in the use of "on the job" and "mentoring" modes of training delivered by officials from the current privileged departments with authoritarian approaches to management. It will

require the development of skilled trainers with adequate resources to plan and implement activities to reframe organizational culture. It will require developing research based linkages with training institutions which do not have a history of relationship with current or past education administration. In short, the leadership of the new educational system needs to have training and support systems to which it can turn for the tasks of transforming the structure and culture of the new educational system.

8.5 **Coordinating Support Systems.** A dominant feature of the current system is the fragmentation of the support systems for management, such that financial control systems, administrative structures, personnel systems, salary payment systems, planning information systems and performance appraisal systems are more often than not incompatible between the different subsystems, and frequently incompatible with each other even within the same system. There is an urgent need for the development of common, compatible or articulated management support systems. The study has demonstrated the following trends which support the above:

a. Financial Control. While many of departments in the privileged sector are implementing the Treasury approved FMS2, departments in the less privileged sectors either have manual expenditure reporting systems, or rely on the services of the relevant Finance Department.Even where financial management systems are capable of yielding information to assist managers, they are frequently not used either because the managers have not been delegated the necessary authority, or because they lack the training necessary for optimal utilization of such information, or the information is not generated in a form which is readily accessible to managers. Very few of the financial management systems encountered in the research are easily compatible with the existing personnel and planning information systems.

b. Administrative Structures. Few of the departments have administrative personnel structures which reflect the programme structure of the financial management or expenditure reporting systems. This seriously limits the possibility for effective delegation of authority.

c. Personnel and Salary Systems. While departments in the privileged sector are implementing an integrated personnel and salary system (PERSAL), many of the other departments rely on manual personnel record systems and the services of Finance department computer systems for salary payment. Even the more advanced systems do not generate information in a format designed to support the management process.

d. Planning Information Systems. About half of the departments have developed planning information systems, while fewer than a quarter have the necessary expertise to employ the information effectively in the planning process. Most planning information systems do not have

extensive financial data, and are not compatible with the financial management systems.

e. Performance Appraisal and Evaluation. The performance appraisal systems of both administrative and professional personnel have not been effectively implemented in many departments partly because of inadequate training of supervisors in use of the system. They have also encountered union resistance and legitimacy problems.

f. Management Training Systems. There are no well development management training systems in any existing departments. Resource shortage for training is a common problem. The few sporadic attempts at introducing education management training systems in departments have tended to rely on cascade strategies with insufficient quality control and accountability requirements. The CfA and PSCs have management training programs, but these have the limitations of not addressing education-specific management issues, and of resting on political and management paradigms which are not appropriate to the needs of a new South Africa.

g. Financial Analysis and Monitoring Systems. The only existing nation-wide database for pre-tertiary education, the SANEP system, was not developed as a monitoring system since the Department which controlled it did not have monitoring authority. There is a need to develop systems which are capable of supporting monitoring authorities, and which yield data which would enable professional financial analysis which focused on broader accountability than financial accountability.

h. Management Accountability. The existing support and control structures all tend to place heavy stress on financial accountability, and managers are frequently not held directly accountable for quality, equity and efficiency performance, nor for staff development and training performance.

8.6 **Creating HRD Capacity.** Capacity building in this area should focus on the relationship between training and other strategies of human resource development. This study has focused on training, yet it is widely recognized that training has relatively little leverage in bringing about sustainable changes in organizational performance. Training needs to be seen within a broader context of human resource development, and this requires special capacity within organizations. The new ministry of education will need flexibility in staffing policies in order to experiment with supervision and inspection roles, as well as potential new roles for student teachers in intern roles. There will be a need to find ways to link performance with incentive systems, since increased efficiency in the educational system will be a major budgetary concern. All these matters are components within a human resource development capacity, and need to be developed in conjunction with the development of training capacity.

Actions Needed to Create Prerequisite Capacities.

8.7 **Create a training coordination mechanism.** It is the suggestion of the study team that a first step be the creation of a training coordination mechanism. This mechanism would have responsibility for coordinating the planning and implementation of training activities affecting the education sector, and their relationship with other transition activities. This mechanism should have the following activity targets:

a. develop effective communication among key staff in current education departments (and related agencies such as DBSA, CfA, PSCs), education related NGOs, education departments of political organizations, such as the Education Desk of the ANC, and international and domestic donors likely to provide major sources of funding for education sector training.

b. through such communication, develop national and regional training goals and specific steps, including selection criteria, for achieving these goals.

c. develop the capacity to monitor and evaluate training activities in order to inform the communication process among key stakeholders as to the progress of meeting training goals.

d. in brief, develop the basic infrastructure to overcome the training system design and management gaps identified in Para 7.20.

8.8 **Create a mechanism to formulate HRD policy issues.** As indicated earlier, training needs to be considered within a broader context of human resource development policies. It is necessary, therefore, that a mechanism be created which can formulate HRD policy options under a new ministry of education and guide discussion of these options among key stakeholder groups. Areas which need exploration include those mentioned in Para 8.4 above, as well as many others which are likely to emerge during the transition process, such as consideration of certain teacher union issues, retrenchment issues and what we have referred to in Section 6 as the exodus factor, to cite a few.

8.9 **Initiate critical mass training.** The long term success of a new educational system depends upon creating the capacity to have it managed well. That condition depends upon initiating steps to overcome the existing system gaps identified in Section 6. First steps towards this end include the careful selection of critical masses of personnel who can, with appropriate guidance, design and test new systems and create the basic infrastructure for implementing these systems in a new educational ministry--as well as creating the basis on which further training in these areas can be planned and implemented (what we have called training for sustainability).

Section 9:
OPTIONS, STRATEGIES AND COSTS

A Review of Options

9.0 **Options for addressing needs.** The range of training design elements over which options may be considered include the following: institutional focus for training planning and coordination; training approach/methodology; how broadly the training mandate should be spread; mix of training providers; where to conduct training; sequence and time frame of training. The options concerned with each are analyzed briefly below. It should also be borne in mind that the scenarios introduced in Section 2 have created options, and further influence the options discussed below.

9.1 **Institutional focus for training planning and coordination.** Given the history of institutional relations among the education sector, universities, NGOs and the private sector, there is no clear choice among any of these entities as the logical focal point for coordinating the planning of training activities which might be undertaken in response to identified needs. Brinkerhoff (1991:161) suggests criteria for selecting institutions for this challenge, and none within South Africa satisfies the criteria for assuming an overall coordinating role. The universities, and more specifically the educational policy units and management programs within a subset of universities, lack the technical knowledge and depth of understanding of operational procedures in many areas to provide leadership. The government's education departments lack expertise in many areas, and the questions of political legitimacy render their leadership potential impotent. The NGOs lack the scope of breadth and depth required of the task. The private sector has the potential for taking on this role, but the challenges it faces in broader issues of transition, suggest a supportive role. This leaves the option of creating a new entity, perhaps on a transitional basis, which can serve as the necessary mechanism identified in Section 8. Such an entity, created as a parastatel or an education trust, could not only serve as a coordinator of training, but also as the mechanism to assure linkage between the education research and development initiatives underway in many areas and the training initiatives planned or underway at the institutional or school level. What has been envisioned by many of the key persons with whom the Study Team met to discuss this issue, is an entity which can aggressively manage the contracting of training activities without becoming a training provider, and through this process assure all stakeholders with interests in training outcomes, including the demand and supply sides, that their interests are met.

9.2 **Training approach/methodology.** There are several options as regards training approaches or methodology (Kerrigan and Luke:1987, 161). In view of the new content being introduced in the system gap areas, it could be argued that a formal, academic approach is warranted. However, in view of the urgent need to meet immediate training objectives which will impact individual and organization performance, we suggest that an action-training approach be followed with regard to the critical mass training, and that this approach be complemented with on-job training for sustainability in subsequent years. It will also be important for academic programs to initiate longer term formal education programs in areas such as policy

analysis, education planning,and organization change, as well as occasional courses in other "system gaps" areas such as monitoring, evaluation, public communications. This need is mentioned in Section 7, and is to a limited degree, considered part of the methodology suggested in this report.

9.3 **Scope of training mandate.** As indicated in our analysis in preceding sections, the need for the training mandate to be as broad as possible, within budget limitations, is the most viable option if transformation of the management culture is to take place, as well as the development of a system capable of bringing an improved quality of education to all South Africans in an efficient, democratic manner. Breadth of scope is meant to cover a wide range of training content areas which have been identified as having priority, as well as a wide range of employees in all levels of management and all geographic areas of the country. The analytic model used in this study accommodates the need for breadth while being sensitive to various influencing factors. The option providing the broadest scope is the comprehensive staffing model, based on the optimistic scenario. However, a narrower mandate may be the most feasible, which is why we used the mixed scenario/ staffing model option in the analysis in Section 6. Should this situation continue, middle management and supervisory levels are likely to experience most staff changes, putting considerable priority on training in those levels in Regional types Y and Z, where current DET, House of Representative and House of Assembly staff are employed.

9.4 **Training providers.** As seen in Section 7, South Africa has a rich diversity of training provider categories, each with its own strengths and weaknesses. The diversity and strength are such that it may well be anticipated that when there is a new political dispensation, thousands of educators from other African countries will flock to South Africa for training and education programs. The level of training demand is such, in terms of the numbers needing training and the diversity of functional areas in which substantial levels of training are needed that there really is no option other than seeking to use the best of all categories of providers, and increasing their capacity and capability. Within the context of national reconstruction and development, there is no justification for exclusivity in the development and use of providers, provided that they are committed to supporting the establishment of management and planning skills which will ensure equity, effectiveness and efficiency in the pursuit of principles of a nonracist, nonsexist, democratic and unified system of education.

9.5 **Training locations.** The use of international training sites is always attractive, especially following years of isolation, but the most viable option is to conduct most training in South Africa, since the numbers needing to be trained are too large to be dealt with in any other fashion. The need to overcome isolation can be met by carefully using foreign trainers and strengthening regional and international linkages involving universities and other types of training providers. At a more specific level, the option most recommended by staff consulted in this study was to have training brought as close to the work site as possible. The desire is not based on convenience alone, but more on the recognition that the more it is possible to integrate training with the on-job training needs of many education department staff, the greater the likelihood that training will be effective--that is, put to use to the benefit of all, not

just the individual engaged in the training. Distance learning techniques to bring training to the work site need considerable improvement before they are able to have meaningful effectiveness, measured by the ability to make lasting changes in the organization--whether it is the school or a regional head office. In short, while off-site training may be necessary for some training activities, the strong feeling expressed throughout the study was that training should be brought to the work-site and be designed and delivered in such a way that it can have an impact on as many staff members as possible. This is compatible with the action-training option expressed earlier. This will require strengthening training delivery capacity at the regional level, which we have supported by including critical mass training of trainers in eight regional areas.

9.6 **Timing and sequence.** Options with regard to timing and sequence of training will largely be dictated by external factors, such as the pace and nature of the political transition process. We have suggested intensive critical mass training in the first year, to be followed thereafter by an annual plan of "training for sustainability". This sequence, under the circumstances discussed in Sections 6, 7, and 8, seems the most viable option. Another option would be to reduce the intensity of the training suggested in our model. This would have the effect of reducing the management burden of training. However, the model used by the team has anticipated the management cost of training by introducing the "cushion factor". The timing of training used in our model, in broad terms that are related to the period of transition from the current system to the new system, is rather conservative, in view of the role training will play in creating new organizational and individual competencies. Another option would be to speed up the rate of timing by which training for sustainability takes place. The cost effects of speeding up the timing rate could be recalculated in our model to determine their impact. Detailed aspects of timing and sequence among the functional areas have not be developed; it is assumed that critical mass training will be initiated **as soon as possible**, but considerably more effort is needed to develop a well-integrated training plan that is strategically response to transition and post-transition needs.

Suggested Intervention Strategy

9.7 **Basic intervention strategy.** The basic strategy suggested by the study team, in view of the considerations mentioned earlier in this report, is the initiation of a **national institute for educational excellence**. This may be a parastatel organization, or an educational trust. Its mission would be to serve as a mechanism for planning and coordinating efforts aimed at improving the quality of education in South Africa, with an **initial focus** on improving the quality of planning and management in the educational system under a new dispensation; and coordinating these efforts with similar efforts at the institutional or school level. Even though South Africa has a rich diversity of training providers, there is a gap in the capacity to coordinate and manage their efforts, and to coordinate the human resource development efforts of the government and other organizations who have a stake in the staffing of the educational bureaucracy under a new dispensation.

9.8 **The institute's role re HRD policies.** As indicated in Section 8, there is need for a mechanism which can facilitate the formulation of human resource development policies for consideration by a new government. There is also a need for a mechanism to facilitate experimentation with programs which may become the bases for policies, as, for example, the need for exploring relationships among training, performance and incentives. These are needs which the institute may address as it engages with key stakeholder groups over the issues of planning to meet staffing and training needs. By operating within a parastatel status during a transitional period the institute may be able to facilitate the secondment of key personnel to participate in critical mass training. By not acting as a training provider itself, but as a contracting mechanism between donors and the educational community, it may be in a position to assist in the development of a training infrastructure which, at some future date, may be merged into a governmental entity.

9.9 **Operational strategies.** By acting as a coordinating mechanism between supply and demand, the institute could fill the gap which now exists due to the lack of a national training plan in the education sector. It could facilitate the development of a common framework of criteria and principles regarding training and staffing policies and programs. It could develop training targets in conjunction with negotiated needs, and screen proposals from training providers. It could act as the monitor of training activities, to assure satisfactory progress towards training objectives, and to facilitate necessary changes. In addition, the institute could facilitate coordination of training and research related to improving the performance of the educational system at all levels.

9.10 **Guiding principles.** In order to develop and maintain the support of the educational community, it is essential that the development and operation of a mechanism such as a national institute for educational excellence be informed by principles which will guide the policies and programs of the new government. These must include a strong commitment to affirmative action regarding all human resources issues, a strong commitment to assuring efficiency and effectiveness in all activities, and a commitment to facilitating the transfer of technology to South Africa's educational system, in order to promote educational excellence for all served by the system.

The Cost Factors

9.11 **Projected Education budget.** The potential costs of the various staffing models and the training costs associated with each need to be considered within the context of projected education budgets. Using budget assumptions in the APEX model we have projected recurrent costs for the staffing models. These projections suggest cost overruns for the salary portion of recurrent costs in all models, based on the current percentage of staff salaries to the total education budget (excluding universities and technikons). These projections are indicated in **Table 9.1**. Clearly the pessimistic scenario has the gloomiest picture in all respects, while the optimistic is predictably better, though still projecting a "salary deficit". How can this issue be addressed? Policy makers have several options: (a) the percentage of the budget that

TABLE 9.1a: STAFFING RECURRENT COSTS: OPTIMISTIC SCENARIO (6.2% RATE OF GROWTH, 10% INFLATION)			
	1990	1993	1997
STAFFING LEVELS	12221	17145	26271
ADMIN COSTS/STAFF MEMBER	33000	43923	64308
GDP	90,381,000,000	108,255,680,015	137,704,698,724
COMPOSITE GDP INCREASE FROM 1990	0.0%	119.8%	127.2%
COMPOSITE INFLATION FACTOR FROM 1990	0.0%	133.1%	146.4%
TOTAL ADJUSTED GDP	90,381,000,000	144,088,310,100	201,613,449,401
EDUC % OF GDP	22.0%	24.0%	24.0%
1990 EDUC BUDG (ALL)	19,883,820,000	34,581,194,424	48,387,227,856
1990 EDUC BUDG (NOT TERT)	16,304,732,400	28,356,579,428	39,677,526,842
% STAFFING RECURRENT COSTS	2.47%	2.47%	2.47%
PROJECTED SALARY REVENUE	403,293,000	701,392,069	981,412,540
PROJECTED SALARY COST	403,293,000	753,073,012	1,689,402,175
SURPLUS (DEFICIT)	0	(51,680,943)	(707,989,635)

TABLE 9.1b: STAFFING RECURRENT COSTS: MIXED SCENARIO (2.9% RATE OF GROWTH, 15% INFLATION)			
	1990	1993	1997
STAFFING LEVELS	12221	14081	22911
ADMIN COSTS/STAFF MEMBER	33000	50189	87781
GDP	90,381,000,000	98,474,382,565	110,403,989,093
COMPOSITE GDP INCREASE FROM 1990		109.0%	112.1%
COMPOSITE INFLATION FACTOR FROM 1990	0.0%	152.1%	174.9%
TOTAL ADJUSTED GDP	90,381,000,000	149,767,226,584	193,097,266,949
EDUC % OF GDP	22.0%	20.5%	20.5%
1990 EDUC BUDG (ALL)	19,883,820,000	30,702,281,450	39,584,939,725
1990 EDUC BUDG (NOT TERT)	16,304,732,400	25,175,870,789	32,459,650,574
% STAFFING RECURRENT COSTS	2.47%	2.47%	2.47%
PROJECTED SALARY REVENUE	403,293,000	622,718,129	802,880,387
PROJECTED SALARY COST	403,293,000	706,704,530	2,011,122,427
SURPLUS (DEFICIT)	0	(83,986,401)	(1,208,242,040)

TABLE 9.1c: STAFFING RECURRENT COSTS: PESSIMISTIC SCENARIO (1.5% RATE OF GROWTH, 20% INFLATION)			
	1990	1993	1997
STAFFING LEVELS	12221	13616	22689
ADMIN COSTS/STAFF MEMBER	33000	57024	118245
GDP	90,381,000,000	94,509,457,211	100,308,893,073
COMPOSITE GDP INCREASE FROM 1990		104.6%	106.1%
COMPOSITE INFLATION FACTOR FROM 1990	0.0%	172.8%	207.4%
TOTAL ADJUSTED GDP	90,381,000,000	163,312,342,060	208,000,520,676
EDUC % OF GDP	22.0%	17.5%	17.5%
1990 EDUC BUDG (ALL)	19,883,820,000	28,579,659,861	36,400,091,118
1990 EDUC BUDG (NOT TERT)	16,304,732,400	23,435,321,086	29,848,074,717
% STAFFING RECURRENT COSTS	2.47%	2.47%	2.47%
PROJECTED SALARY REVENUE	403,293,000	579,666,119	738,283,788
PROJECTED SALARY COST	403,293,000	776,455,891	2,682,824,786
SURPLUS (DEFICIT)	0	(196,789,773)	(1,944,540,998)

goes to staff salaries in ministry head office and regional offices can be raised from the present 2.47% of the total education budget to a higher level; (b) the annual rate of increases in salaries can slow down from the present rate of 10%; (c) the target level of staff can be reduced; (d) education's share of the total budget can be increased, and (e) salary policy for teachers that relates automatic salary increases to upgrading of qualifications can be changed to limit salary increases to upgrading only in strategically important curricular areas, such as maths, sciences and vocationally relevant fields.

9.12 **Efficiency and cost containment.** There may be other options, or combinations of options, which reflect regional variations within the country. For example, it may be possible to deviate from the pupil:staff ratio where it can be shown that a regional system can operate more efficiently. Indeed, the whole issue of efficiency needs to be monitored very carefully under the new system. The introduction of new management systems to overcome existing gaps will, in the short run, add costs. But, in the long run, where such systems have been made to perform in an accountable manner, and where incentives have been linked to efficiency, it has been possible to reduce the costs of managing educational systems. Thus, it is possible that the projected staffing levels, based on our pupil:staff ratio, may be adjusted as the system improves its efficiency. Another policy option which may have an impact on system costs concerns the current experimentation with Model C schools. Our model has not attempted to analyze the budget implications of this policy. While the Model C plan may owe its existence to factors other than pure cost containment, the reality is that school systems world wide are experimenting with variations of cost containment and cost recovery policies, and South Africa may need to do the same.

9.13 **Estimates of training costs.** Section 6 suggested the utilization of a training strategy which combines training a critical mass of trainers and staff in high priority functional areas with follow-on training for sustainability. **Table 9.2** indicates the cost of the critical mass training, based on certain cost assumptions.[1] The focus of critical mass training is on the middle management level, as the estimate of costs indicate. To those who may be alarmed at an estimate of $ 10 million to carry out critical mass training for the bureaucracy and the training providers, it should be noted that this amount is less than two tenths of one per cent of the current education budget. Studies done on international efforts to carry out education reform have steadfastly reported the failure of such efforts because of under estimating the management components, and failing to fund organizational change strategies, especially training, adequately.

9.14 **Training for sustainability costs. Table 9.3** indicates **annual** cost estimates to carry out training to sustain changes introduced through the first year of operation. (See Methodology Appendix for cost estimates under other staffing models.) The $ 1.2 million annual cost under the mixed staffing model represents less than two tenths of one per cent of the projected budget for the portion of the education sectors covered in this study. In sum, the training costs forecast by this model represent a small but vitally necessary commitment to improving the quality of education planning and management in the new South Africa.

TABLE 9.2: CRITICAL MASS TRAINING COSTS

FUNCTIONAL AREAS	WEEKLY RATE *	EXEC.	EXEC. COST	MIDDLE MGMT **	M. MGMT COST	SUPER.	SUPER. COST	CLERICAL	CLERICAL COST	TOTAL
SYSTEM GAP										
Policy Analysis	1100	10	22,000	81	891,000	124	148,800	0	0	1,061,800
MIS	800	10	16,000	81	648,000	124	148,800	33	16,500	829,300
M/E	800	10	16,000	81	648,000	124	148,800	33	16,500	829,300
Public Communication	1100	10	22,000	81	891,000	124	148,800	33	16,500	1,078,300
Planning/Budgeting Link	800	10	16,000	81	648,000	124	148,800	33	16,500	829,300
Organizational Development	1100	10	22,000	81	891,000	124	148,800	33	16,500	1,078,300
SERVICE DELIVERY										
ABE	800	10	16,000	59	472,000	42	50,400	11	5,500	543,900
OTHER										
Curriculcum R & D	800	10	16,000	59	472,000	42	50,400	11	5,500	543,900
Project Cycle Mgmt	800	10	16,000	59	472,000	42	50,400	11	5,500	543,900
Basic Mgmt	800	10	16,000	59	472,000	42	50,400	11	5,500	543,900
Performance Appraisal	800	10	16,000	59	472,000	42	50,400	11	5,500	543,900
Procurement	800	10	16,000	59	472,000	42	50,400	11	5,500	543,900
Teacher Development	800	10	16,000	59	472,000	42	50,400	11	5,500	543,900
Mgmt S I Functions	800	10	16,000	59	472,000	42	50,400	11	5,500	543,900
TOTALS:		140	242,000	958	8,393,000	1080	1,296,000	253	126,500	10,057,500

Cost Per Week: Supervisory = $600
Cost Per Week: Clerical = $500
Number of Weeks for Executives = 2
Number of Weeks for Middle Management = 10
Number of Weeks for Supervisory = 2
Number of Weeks for Clerical = 1

NOTE:
* These weekly rates apply only to Executive and Middle Management
** Includes 48 Training Providers in Systems Gaps Areas and Other Areas

TABLE 9.3b: ANNUAL SUSTAINABILITY COSTS: MIXED MODEL

FUNCTIONAL AREAS	ATN	EXEC. FACTOR	EXEC. COSTS	M. MGMT FACTOR	M. MGMT COSTS	SUPER. FACTOR	SUPERV. COSTS	CLERICAL FACTOR	CLERICAL COSTS	TOTAL COSTS
SYSTEM GAP										
Policy Analysis	59.8	24	1,428	1055	63,132	537	32,114	159	9,517	106,192
MIS	82.3	24	1,964	1055	86,820	537	44,164	159	13,088	146,037
M/E	82.3	24	1,964	1055	86,820	537	44,164	159	13,088	146,037
Public Communication	80.1	24	1,912	1055	84,494	537	42,981	159	12,738	142,124
Planning/Budgeting Link	84.3	24	2,012	1055	88,924	537	45,234	159	13,405	149,575
Organizational Development	99.0	24	2,364	1055	104,491	537	53,153	159	15,752	175,760
SERVICE DELIVERY										
ABE	2.2	24	52	1055	2,285	537	1,163	159	345	3,844
OTHER										
Curriculcum R & D	27.1	24	647	1055	28,574	537	14,535	159	4,308	48,063
Project Cycle Mgmt	23.6	24	563	1055	24,896	537	12,644	159	3,753	41,877
Basic Mgmt	31.5	24	752	1055	33,255	537	16,916	159	5,130	55,937
Performance Appraisal	31.9	24	762	1055	33,695	537	17,140	159	5,080	56,677
Procurement	22.3	24	532	1055	23,516	537	11,962	159	3,545	39,556
Teacher Development	29.5	24	705	1055	31,160	537	15,851	159	4,697	52,413
Mgmt S I Functions	29.5	24	704	1055	31,116	537	15,828	159	4,691	52,339
TOTALS:	685.5		16,363		723,177		367,870		109,021	1,216,431

Cost Per Week: Executive = $800
Cost Per Week: Middle Management = $800
Cost Per Week: Supervisory = $600
Cost Per Week: Clerical = $500
Number of Weeks for Executives = 2
Number of Weeks for Middle Management = 6
Number of Weeks for Supervisory = 2
Number of Weeks for Clerical = 1

Executive Proportion = .015
Middle Management Proportion = .220
Supervisory Proportion = .447
Clerical Proportion = .318

9.15 **Funding for the institute.** The training costs indicated above represent operational costs of training. In addition to these costs other costs will be necessary to initiate and operate an institute as described. Determination of these costs may be part of the Terms of Reference of any follow-up to this report, since considerable attention would need to be given to the relationship with existing training structures and policy institutes. For our purposes we have assumed an annual operating cost of $ 1 million to cover all aspects of initiating and operating programs, including the conducting of policy conferences as suggested in Section 8.

9.16 **Projected total costs.** The combined costs of critical mass training, four years of sustainability training, and the operation of the national institute, may vary between $15 and 20 million, depending on the staffing models used, and allowing for flexibility in the costs of the institute. Within the context of the total investment that is likely to be needed to bring quality education to school age South Africans, this is a necessary, affordable and prudent investment.

ENDNOTE

1. **Assumptions regarding Training costs.**

A. <u>Structure of Training:</u>

Critical Mass Training

1. Emphasis in critical mass training will be with Training provider staff and middle management staff of the bureaucracy. It is assumed that staff in these categories will receive the following generic critical mass training plan.

Generic Critical Mass Training Plan: (Foreign Instructors needed in system gap areas; rest done with local staff)

Phase One:	**Concepts & Models**.....2 weeks
Phase Two:	**Analysis of system needs & Design**.....4 weeks
Phase Three:	Test, Redesign, & Implementation.....4 weeks
TOTAL	.....10weeks

2. It is assumed that executive level will receive two weeks of training, supervisory two weeks and clerical one week.

Sustainability Training

1. It is assumed that generic sustainability training will also emphasize middle level management, according to the generic training plan below.

Generic Sustainability Training Plan: (all training done with local instructors)

Phase One:	Concepts & Models.....1 weeks
Phase Two:	Basic Application.....1 weeks
Phase Three:	Advanced Application.....2 weeks (OJT)
Phase Four:	Performance Improvement.....2 weeks (OJT)
TOTAL	.....6weeks

2. It is assumed that sustainability training for other levels will be as follows: executive one week of training, supervisory two weeks and clerical one week

B. Costs of Training: System Gap Areas

1. Unit cost differences among management levels:

Executive and middle management levels:
$800-1100/week depending on local or foreign trainers

Supervisory: $600/week

Clerical: $500/week

2. Assumptions:

a. Instructor costs per week: (including salary, OH, travel and per diem)

Foreign Instructors:	$ 3,900
Local Instructors	$ 1,850

b. Trainee Costs per week: $ 700

Salary Supplement: $50/day
Per diem: $50/day
Materials: $100
Misc: $100

c. Training Activities will have 25 trainees per activity

6. Training costs/week of training:

a. with Foreign Instructor:	$ 1,100
b. with Local Instructor:	$ 800

C. Cost of Training: Other Functional Areas

Assumptions regarding weekly training costs:

Executive/ middle management levels: $ 800/week/trainee
Supervisory: $ 600/week/trainee
Clerical: S 500/week/trainee

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METHODOLOGY APPENDIX

Note 1: **Why is Education Dept., House of Representatives in Region Type Z?**

The character of the population distribution of pupils served by the Education Department of the House of Representatives, and the character of the community support base (universities, NGO community, etc.) available to the department , when compared with similar factors regarding the white and DET systems, is more like that in the Cape Province than in Transvaal or Natal.

When House of Representatives is included in Type Z. the result is the following:

Region Type	% of the pupil Pop that is Black
X	100
Y	77
Z	40

This relationship of the black pupil population, and therefore the black educational departmental bureaucracy, to the rest of the pupil population and departments in the same region, tends to meet our defining characteristics of each region much more closely than if Rep is included in Region Y. In that case the following obtains:

Region Type	% of the pupil Pop that is Black
X	100
Y	65
Z	70

Note 2: **Assumptions regarding Head Office Staffing and relationship to DET**

a. To calculate the impact of enrollment growth on the staffing needs of the Ministry head office, we assumed that the proportional relationship between head office and regions for executive and middle management levels would be approximately the same as it is now in the House of Assembly (that is, 41% and 22% respectively. **Consequently, we used 40% and 20% for these levels respectively.** However, since it is assumed that much of the responsibility for policy implementation will be delegated to the regional level, it is further assumed that supervisory and clerical levels at the ministry head office will be much less sensitive to enrollment growth. **Accordingly, we have assumed that head office supervisory staff will be 15% of the total of regional supervisory staff, and 10% for clerical staff. It is further assumed that these proportions do not change under the various scenarios.** In fact, we assumed that the Minstry Head Office staffing determined under the Optimistic scenario is a constant in determining "cushion" and "exodus" factors in Tables 6.9 and 6.10.

b. The Study Team was unable to obtain a breakdown of DET Head Office staffing, either by total number or by levels. We have estimated DET's Head Office staffing using the same proportions which actually exist in the House of Assembly, where there was full reporting by Head Office and the provincial departments. Thus, the 7 Executive level staff reported as employed in Assembly Head Office are 41% of the total executive level staffing for Assembly (17); the 80 Assembly Head Office Middle Management staff are 22% of Assembly's total middle management staffing; the supervisory proportion is 21% and clerical is 19%.

c. These proportions were then applied to the data provided by DET to yield DET Head Office data. The remaining personnel were allocated between DET Regional Types Y and Z based on proportion of DET pupil enrollment in those regions. Regional type Y, with 1,483,502 has 66% of the DET remaining staff, and DET Regional Type Z has 34%. Having allocated 7 executives to the DET Head Office (41% of 18 reported), 66% of the remaining eleven were allocated to the executive level in Regional Type Y, and the remainder to executive level in Regional Type Z. The same process, with the appropriate proportions by management level as determined from Assembly, were applied to the remaining positions, by level, reported by DET.

d. A strong argument could be made for including in ministerial head office staffing needs the proportion of staff time contributed by staff of the Development Bank of Southern Africa to education sector affairs in TBVC and SGTs. Without doubt, important aspects of policy making and implementation are carried out by DBSA staff for the education departments in these areas.

Note 3: **Assumptions regarding Enrollment Projections**

Q: What is the basis of the Optimistic Enrollment projection?

A: The basis is the set of assumptions about population growth and intake and survival rates used to project enrollment between 1993 and 1997 in the APEX Model, plus inclusion of 1.4 million of the estimated 1.7 million out-of-school youths among the black school-aged population. The APEX model notes an out-of-school poulation of 1.7 million in 1990. In our calculations for the Optimistic model, we assume that 1.4 million would return by 1997. The basis for this assumption is that the following conditions will have changed under a new dispensation, which will motivate a return to school:

1. legitimacy will have been restored to the school system, and its teachers and administrators;

2. concrete steps will have been taken to improve the quality of school life and the education being given to school-attenders; these include (1) more teachers in the schools, thus a lower pupil/teacher ratio; (2) more classrooms, thus a lower classroom/pupil ratio; (3) more schools, meaning less distance for rural students to travel; (4) more learning materials available to each pupil; (5) better qualified teachers, using better teaching methods; (6) more community involvement in school management, meaning more support for school participation;

3. a more productive economy, meaning more jobs for qualified school-leavers.

Having no concrete information to indicate where, geographically, this population is, we have arbitrarily allocated this population to black departments on the basis of their proportional share of the total in-school population in 1990.

Q. What is the basis of the Pessimistic enrollment projection?

A. As regards black enrollment, the enrollment projection under the pessimistic scenario does not assume any return of the out-of-school youth, since under this scenario the conditions which created motivation to return, noted in explaining the Optimistic model, will not have been met. Furthermore, the assumptions about improvements in school survival and repetition rates used in our original APEX generated projections wiil not bave been satisfied, and these factors have been adjusted to reflect this. The adjustments are the same as reducing the rate of projected growth by 30%.

As regards white enrollment, our assumption is that white flight is the only real cause of changes in enrollment projection, and the assumed value of 30% less than that which would have occurred under the optimistic scenario is arbitrary, and applied equally to all four white departments.

Indian and coloured enrollments are assumed to grow as projected in the optimistic scenario, using the APEX model.

Q. What is the basis of the mixed enrollment projections?

A. The mixed scenario enrollment assumes that black urban enrollment will increase at a rate ten per cent less than the optimistic scemario, but rural enrollment will grow at the same rate as the pessimistic scenario. White enrollment will be ten percent less than projected in the optimistic scenario, while coloured and Indian will be the same as in the optimistic scenario.

Note 4: **The Cushion factor.**

The assumptions of the cushion factor are as follows:

a. The optimistic scenario is assumed to have no impact on the cushion; that is, the cushion factor is applied as described in the text.

b. Under the pessimistic scenario the cushion is not only removed, but staffing needs are not brought up to the level suggested by staff: pupil enrollment ratios. In other words, there is an "anti-cushion" condition. This is due to the assumed poor state of the economy. Under this scenario, staffing in Regional Type X would expand during the 1993-1997 period to meet only 60% of the projected staffing needs gap for this period--that is the gap between present staffing and staffing needs projected under the pessimistic APEX model. These increases in staff would be phased in without acceleration. Staffing in Regional Type Y would expand to meet only 40% of the gap, and would be phased in without acceleration. Staffing in Regional Type Z would expand to meet only 20% of the gap, without accelerated phasing.

c. Under the mixed scenario, Regional Type X fares the same as in the pessimistic scenario, due to its rural character. Regional Type Y expands staffing to meet 100% of the gap, but without acceleration--in effect, without a cushion. Regional Type Z expands staffing to meet only 60% of the gap, and this is introduced without acceleration.

d. The staffing of the Ministry Head Office is assumed to be constant in all scenarios; that is, the optimistic scenario applies to Ministry Head Office in all conditions. The "anti-cushion" never applies to staffing the Ministry Head Office.

Note 5: **The Exodus Factor**

Assumptions regarding the exodus factor and its relationship to the various scenarios are as follows:

a. In the optimistic scenario:

Executive level: 30% attrition of current staff in the DET, House of Assembly departments and House of Representatives; 5% in all others.

Middle Management: 30% attrition in DET; 5% in all others. It is estimated that 90% of the staff at this level in DET is white. This estimate is based on data provided by DNE through a survey entitled "Utilisation of the FTE Personpower Resources according to Personnel Category", covering the year ending March 31, 1990.

Supervisory and Clerical: 35% attrition in DET; 5% in all others. It is estimated that 50% of head and regional office staff at these levels in DET are white, and 70 % of the white staff may leave. The rational for a higher percentage at these levels is that it is believed that staff at these levels will have a greater interest in not being a part of the new system, and with a growing economy, will be able to find opportunities elsewhere.

b. In the mixed scenario:

Executive: 40% attrition of current staff in DET, House of Assembly and House of Representatives; 5% in all others.

Middle Management: 45% of the staff in DET; 40 % in House of Assembly and House of Representatives; 5% in all others.

Supervisory and Clerical: 20% of the staff in DET; 5% of all others. The rational for a lower percentage than in the optimistic model is that the economy will be able to absorb fewer, so they will hang on to present positions.

c. In the pessimistic scenario:

Executive: 50% of current staff in DET, House of Assembly and House of Representatives; 5% in all others.

Middle Management: 50% of the staff in DET; 40% in House of Assembly and House of Representatives; 5% in all others.

Supervisory and Clerical: 20% of the staff in DET; 5 % in all others.

How to read Tables in the 6.10 series.

a. Looking at the summary tables (6.10 m,n, and o):

1. In Table 6.10m, Impact of Optimistic Scenario on Staff Exodus, the lower right corner of the table indicated that 7083 new positions will be needed to bring the staffing level from its current level to that based on enrolment projections. It also says that there will be an exodus gap of 2158 persons. The difference between 7083 and 2158 (4925) is the projected change in staffing between current levels and 1993. In other words, while the total change between now and then is 4925, the real change is 7083 because 2158 persons may be exodusing the education bureaucracy because of the political situation.

2. In Table 6.10n, Impact of Mixed Scenario on Staff Exodus, the difference between, 3623, new position, and 1732, exodus gap, is 1891, the projected difference in total staffing levels between now and 1993 projected levels.

b. Looking at the detailed tables, 6.10a-l:

In the detailed tables for the Mixed Scenario, Tables 6.10i-l, the following is indicated: in 6.10i, Impact at the Executive level, the last row indicates that 16 (exodus gap) of the 70 current executives will depart, leaving 54 remaining. In order to meet the projected 1993 staffing need of 105, a staffing gap of 51 has to be filled. At the middle management level (Table 6.10j) the model projects that 498 staff will leave, resulting in the need to add 790 to fill the gap between the current level of 1,563 and the projected 1993 level of 1855. At the supervisory level (Table 6.10k) even though the gap between current and projected 1993 levels is relatively small (5269 - 5005 =264) a staffing gap of 860 may exist because 597 may leave. At the clerical level (Table 6.10l) as many as 622 persons may leave clerical positions in the education system, meaning that 1,927 persons may be needed to fill a gap of 1,305.

Note 6: **Training Impact Assessment.**

It should be emphasized that all training needs included in this report are deemed to be high priority, and the values of high, medium and low in the following tables do not refer to priority. What the values do means is that, for purposes of estimating training need by functional areas and by management levels, is the percent of staff in an area who will need training. It is assumed that impact assessment is higher in the "system gap" areas than in other areas. In the system gap areas, High was given a value of ten per cent, Medium 7 % and Low 3%. In other areas, High was given a value of 5%, Medium 3.5% and Low 2%.

Note 7: **Critical Mass Training**

Assumptions concerning critical mass training and its estimation:

a. The critical mass needed in an area identified as a system gap is substantially larger than that needed in a service delivery gap or other functional area of training need. This is because the tasks of designing and initiating new systems, with all the attendant steps of defining, developing and testing new policies and procedures are required in addition to the tasks of routine implementation and monitoring. In areas where there are existing systems the critical mass may be much smaller since training contributes in an incremental way to an existing order and structure, even if that order needs substantial change.

b. It may be recalled that in this study we established a general relationship between the level of staffing at the ministry head offices and the regional type office as follows: (a) at the executive level, head office has approximately 40% the combined number of staff at the regional level; (b) at the middle management level, head office has approximately 20% of the combined number of staff as the regional level; (c) at the supervisory level, head office has approximately 15% of the staff at the regional level; and (d) at the clerical level, head office has 10% of the staff as the regional level. We have used these relationships to estimate the number of staff to be involved in critical mass training at the regional level.

1. In the "systems gaps" functional areas we have started with the ministry head office and assumed the following critical mass training needs per functional area: one executive, six middle management staff; 18 supervisory level staff, and six clerical staff. Using the relationships suggested above, with a modification to include more executive level staff, we have estimated the combined head office-regional offices critical mass training needs, per systems gap functional area to be 10 executive level staff, 33 middle management level staff, 124 supervisory level staff and 33 clerical level staff. To this number we add 48 staff persons from training provider organizations.

2. In other functional areas we have assumed head office critical mass training needs (per functional area) to be one executive, two middle level staff, six supervisory level staff, and two clerical level staff. At the regional level we have assumed nine executive level staff, nine middle level staff, 36 supervisory level staff, and nine clerical level staff. Staff from training providers are not included in critical mass training in non-system gap functional areas.

3. The sum of the critical mass training needs, by level and by areas are shown in Table 6.15.

As in other cases where assumptions were made, these may be refined by further investigation in the future.

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TABLE 2.5b: MIXED SCENARIO FOR 1997 STAFFING AND ENROLMENT

Projected 1997 Enrolment	1991 Enrolment (Table 2.2)	Enrolment Adjustment Factor	DEPARTMENTS BY REGIONAL TYPE	ADJUSTED 1997 ENROLMENT	STAFFING CATEGORY EXECUTIVE TSN	MIDDLE TSN	SUPERVISORY TSN	CLERICAL TSN	TOTAL TSN
727535	573664	0.7	Bophuthatswana	681374	9	143	330	692	1175
364555	287453	0.7	Ciskei	341424	4	72	166	347	589
404142	318667	0.7	Gazankulu	378500	5	80	183	385	653
287645	226809	0.7	KaNgwane	269394	3	57	131	274	464
1178236	929043	0.7	Lebowa	1103478	14	232	535	1121	1903
1473252	1161664	0.7	Transkei	1379776	18	290	669	1402	2379
294013	231830	0.7	Venda	275358	4	58	133	280	475
4729378			TYPE X TOTAL	4429304	57	931	2147	4501	7637
244106		1	Delegates	244106	3	51	118	248	421
1881415	1483502	0.9	DET (Type Y)	1841624	24	387	893	1872	3175
178980	141126	0.7	KwaNdebele	167624	2	35	81	170	289
1954148	1540852	0.7	KwaZulu	1830159	24	385	887	1860	3155
125619	120973	0.9	Natal (Assembly)	125154	2	26	61	127	216
135695	106996	0.7	QwaQwa	127085	2	27	62	129	219
629202	605932	0.9	Transvaal (Assembly)	626875	8	132	304	637	1081
5149165			TYPE Y TOTAL	4962627	64	1043	2406	5043	8556
259595	249994	0.9	Cape (Assembly)	258635	3	54	125	263	446
971255	765838	0.9	DET (Type Z)	950713	12	200	461	966	1639
85497	82335	0.9	OFS (Assembly)	85181	1	18	41	87	147
907417		1	Representatives	907417	12	191	440	922	1564
2223764			TYPE Z TOTAL	2201946	28	463	1067	2238	3796
12102307			REGIONAL SUBTOTAL	11593877	149	2437	5620	11782	19989
			MINISTRY HEAD OFFICE *		60	487	843	1178	2568
			GRAND TOTAL		209	2925	6463	12961	22558

NOTES: * See Note 2 in Methodology Appendix
TSN = Targeted Staffing Needs

PUPIL PER STAFF and PUPIL PER CLERICAL STAFF RATIOS

PPSR for Executives =	77700
PPSR for Middle Management =	4757
PPSR for Supervisory =	2063
PCSR for Clerical =	984

TABLE 2.5c: PESSIMISTIC SCENARIO FOR 1997 STAFFING AND ENROLMENT

Projected 1997 Enrolment	1991 Enrolment (Table 2.2)	Enrolment Adjustment Factor	DEPARTMENTS BY REGIONAL TYPE	ADJUSTED 1997 ENROLMENT	EXECUTIVE TSN	STAFFING CATEGORY MIDDLE TSN	SUPERVISORY TSN	CLERICAL TSN	TOTAL TSN
727535	573664	0.7	Bophuthatswana	681374	9	143	330	692	1175
364555	287453	0.7	Ciskei	341424	4	72	166	347	589
404142	318667	0.7	Gazankulu	378500	5	80	183	385	653
287645	226809	0.7	KaNgwane	269394	3	57	131	274	464
1178236	929043	0.7	Lebowa	1103478	14	232	535	1121	1903
1473252	1161664	0.7	Transkei	1379776	18	290	669	1402	2379
294013	231830	0.7	Venda	275358	4	58	133	280	475
4729378			TYPE X TOTAL	4429304	57	931	2147	4501	7637
244106		1	Delegates	244106	3	51	118	248	421
1881415	1483502	0.7	DET (Type Y)	1762041	23	370	854	1791	3038
178980	141126	0.7	KwaNdebele	167624	2	35	81	170	289
1954148	1540852	0.7	KwaZulu	1830159	24	385	887	1860	3155
125619	120973	0.7	Natal (Assembly)	124225	2	26	60	126	214
135695	106996	0.7	QwaQwa	127085	2	27	62	129	219
629202	605932	0.7	Transvaal (Assembly)	622221	8	131	302	632	1073
5149165			TYPE Y TOTAL	4877462	63	1025	2364	4957	8409
259595	249994	0.7	Cape (Assembly)	256715	3	54	124	261	443
971255	765838	0.7	DET (Type Z)	909630	12	191	441	924	1568
85497	82335	0.7	OFS (Assembly)	84548	1	18	41	86	146
907417		1	Representatives	907417	12	191	440	922	1564
2223764			TYPE Z TOTAL	2158310	28	454	1046	2193	3721
12102307			REGIONAL SUBTOTAL	11465075	148	2410	5558	11651	19767
			MINISTRY HEAD OFFICE *		59	482	834	1165	2540
			GRAND TOTAL		207	2892	6392	12817	22307

NOTES: * See Note 2 in Methodology Appendix
TSN = Targeted Staffing Needs

PUPIL PER STAFF and PUPIL PER CLERICAL STAFF RATIOS

PPSR for Executives =	77700
PPSR for Middle Management =	4757
PPSR for Supervisory =	2063
PCSR for Clerical =	984

TABLE 6.2a: SUMMARY OF ANTICIPATED CHANGE IN COMPREHENSIVE STAFFING MODEL

	STAFFING CATEGORY												TOTAL			
	EXECUTIVE			MIDDLE			SUPERVISORY			CLERICAL						
REGIONAL TYPE	CSL	PROJECTED 1993 STAFFING	CHANGE	CSL	PROJECTED 1993 STAFFING	CHANGE	CSL	PROJECTED 1993 STAFFING	CHANGE	CSL	PROJECTED 1993 STAFFING	CHANGE	SUM OF CSL	PROJECTED 1993 STAFFING	TOTAL CHANGE	% CHANGE
TYPE X	20	40	20	223	588	365	725	1482	757	1276	2961	1685	2244	5071	2827	126%
TYPE Y	20	36	16	660	824	164	2429	2535	106	2351	3395	1044	5460	6790	1330	24%
TYPE Z	11	15	4	429	442	13	1147	1147	-0	1226	1461	235	2813	3065	252	9%
MHO	19	39	20	251	378	127	704	815	111	730	987	257	1704	2219	515	30%
TOTAL	70	130	60	1563	2232	669	5005	5979	974	5583	8804	3221	12221	17145	4924	40%

TABLE 6.2b: SUMMARY OF ANTICIPATED CHANGE IN MIXED STAFFING MODEL

	STAFFING CATEGORY												TOTAL			
	EXECUTIVE			MIDDLE			SUPERVISORY			CLERICAL						
REGIONAL TYPE	CSL	PROJECTED 1993 STAFFING	CHANGE	CSL	PROJECTED 1993 STAFFING	CHANGE	CSL	PROJECTED 1993 STAFFING	CHANGE	CSL	PROJECTED 1993 STAFFING	CHANGE	SUM OF CSL	PROJECTED 1993 STAFFING	TOTAL CHANGE	% CHANGE
TYPE X	20	25	5	223	308	85	725	896	171	1276	1663	387	2244	2891	647	29%
TYPE Y	20	29	9	660	737	77	2429	2424	-5	2351	2889	538	5460	6079	619	11%
TYPE Z	11	13	2	429	433	4	1147	1138	-10	1226	1347	121	2813	2931	118	4%
MHO	19	39	20	251	378	127	704	815	111	730	987	257	1704	2219	515	30%
TOTAL	70	105	35	1563	1855	292	5005	5273	268	5583	6887	1304	12221	14120	1899	16%

TABLE 6.2c: SUMMARY OF ANTICIPATED CHANGE IN SELECTIVE STAFFING MODEL

	STAFFING CATEGORY												TOTAL			
	EXECUTIVE			MIDDLE			SUPERVISORY			CLERICAL						
REGIONAL TYPE	CSL	PROJECTED 1993 STAFFING	CHANGE	CSL	PROJECTED 1993 STAFFING	CHANGE	CSL	PROJECTED 1993 STAFFING	CHANGE	CSL	PROJECTED 1993 STAFFING	CHANGE	SUM OF CSL	PROJECTED 1993 STAFFING	TOTAL CHANGE	% CHANGE
TYPE X	20	25	5	223	308	85	725	896	171	1276	1663	387	2244	2891	647	29%
TYPE Y	20	24	4	660	689	29	2429	2424	-5	2351	2560	209	5460	5696	236	4%
TYPE Z	11	12	1	429	430	1	1147	1143	-4	1226	1265	39	2813	2849	36	1%
MHO	19	39	20	251	378	127	704	815	111	730	987	257	1704	2219	515	30%
TOTAL	70	99	29	1563	1805	242	5005	5278	273	5583	6474	891	12221	13656	1435	12%

TABLE 6.2: SUMMARY OF MODELS OF ANTICIPATED STAFFING CHANGE

	STAFFING CATEGORY												TOTAL			
	EXECUTIVE			MIDDLE			SUPERVISORY			CLERICAL						
MODEL	CSL	PROJECTED 1993 STAFFING	CHANGE	CSL	PROJECTED 1993 STAFFING	CHANGE	CSL	PROJECTED 1993 STAFFING	CHANGE	CSL	PROJECTED 1993 STAFFING	CHANGE	SUM OF CSL	PROJECTED 1993 STAFFING	TOTAL CHANGE	% CHANGE
COMPREHENSIVE	70	130	60	1563	2232	669	5005	5979	974	5583	8804	3221	12221	17145	4924	40%
MIXED	70	105	35	1563	1855	292	5005	5273	268	5583	6887	1304	12221	14120	1899	16%
SELECTIVE	70	99	29	1563	1805	242	5005	5278	273	5583	6474	891	12221	13656	1435	12%

NOTE: CSL = Current Staff Level
MHO = Ministry Head Office

TABLE 6.9a: STAFFING CUSHION - COMPREHENSIVE MODEL: EXECUTIVE CATEGORY

DEPARTMENTS BY REGIONAL TYPE	PROJECTED STAFFING THRU 1997	CURRENT STAFFING (1992)	PROJECTED GROWTH	CUSHION FACTOR*	CUSHION IN 1993	ANNUAL GROWTH (94-97)	PROJECTED STAFFING IN 1993
Bophuthatswana	11	2	8.7	0.4	3.5	1.3	6
Ciskei	5	5	0.4	0.4	0.1	0.1	5
Gazankulu	6	1	4.9	0.4	2.0	0.7	3
KaNgwane	4	0	4.2	0.4	1.7	0.6	2
Lebowa	17	1	16.3	0.4	6.5	2.5	8
Transkei	22	9	12.7	0.4	5.1	1.9	14
Venda	4	2	2.3	0.4	0.9	0.4	3
TYPE X TOTAL:	70	20	50		20	8	40
Delegates	3	3	0.1	0.3	0.0	0.0	3
DET (Type Y)	28	7	20.7	0.3	6.2	3.6	13
KwaNdebele	3	0	2.6	0.3	0.8	0.5	1
KwaZulu	29	5	23.7	0.3	7.1	4.2	12
Natal (Assembly)	2	2	-0.4	0.3	-0.1	-0.1	2
QwaQwa	2	0	2.0	0.3	0.6	0.3	1
Transvaal (Assembly)	8	3	5.1	0.3	1.5	0.9	5
TYPE Y TOTAL:	74	20	54		16	9	36
Cape (Assembly)	3	3	0.3	0.2	0.1	0.1	3
DET (Type Z)	14	4	10.3	0.2	2.1	2.0	6
OFS (Assembly)	1	2	-0.9	0.2	-0.2	-0.2	2
Representatives	12	2	9.7	0.2	1.9	1.9	4
TYPE Z TOTAL:	30	11	19		4	4	15
REGIONAL SUBTOTAL:	174	51	123		40	21	91
MINISTRY HEAD OFFICE:	70	19	51	0.4	20	8	39
GRAND TOTAL:	243	70	173		60	28	130

TABLE 6.9b: STAFFING CUSHION - COMPREHENSIVE MODEL: MIDDLE MANAGEMENT CATEGORY

DEPARTMENTS BY REGIONAL TYPE	PROJECTED STAFFING THRU 1997	CURRENT STAFFING (1992)	PROJECTED GROWTH	CUSHION FACTOR*	CUSHION IN 1993	ANNUAL GROWTH (94-97)	PROJECTED STAFFING IN 1993
Bophuthatswana	175	52	122.7	0.4	49.1	18.4	101
Ciskei	88	12	75.5	0.4	30.2	11.3	42
Gazankulu	97	28	69.0	0.4	27.6	10.4	56
KaNgwane	69	14	55.1	0.4	22.0	8.3	36
Lebowa	283	18	264.9	0.4	106.0	39.7	124
Transkei	354	85	268.7	0.4	107.5	40.3	193
Venda	71	14	56.6	0.4	22.6	8.5	37
TYPE X TOTAL.	1135	223	912		365	137	588
Delegates	51	49	2.3	0.3	0.7	0.4	50
DET (Type Y)	452	303	148.7	0.3	44.6	26.0	348
KwaNdebele	43	17	26.0	0.3	7.8	4.5	25
KwaZulu	469	97	372.2	0.3	111.6	65.1	209
Natal (Assembly)	26	36	-9.6	0.3	-2.9	-1.7	33
QwaQwa	33	13	19.6	0.3	5.9	3.4	19
Transvaal (Assembly)	132	145	-12.7	0.3	-3.8	-2.2	141
TYPE Y TOTAL:	1206	660	546		164	96	824
Cape (Assembly)	55	78	-23.4	0.2	-4.7	-4.7	73
DET (Type Z)	233	156	77.2	0.2	15.4	15.4	171
OFS (Assembly)	18	33	-15.0	0.2	-3.0	-3.0	30
Representatives	191	162	28.7	0.2	5.7	5.8	168
TYPE Z TOTAL:	496	429	67		13	14	442
REGIONAL SUBTOTAL:	2838	1312	1526		542	246	1854
MINISTRY HEAD OFFICE:	568	251	317	0.4	127	48	378
GRAND TOTAL:	3406	1563	1843		669	293	2232

* Refer to Section 2 for explanation of Cushion and Anti-Cushion factors

TABLE 6.9c: STAFFING CUSHION - COMPREHENSIVE MODEL: SUPERVISORY CATEGORY

DEPARTMENTS BY REGIONAL TYPE	PROJECTED STAFFING THRU 1997	CURRENT STAFFING (1992)	PROJECTED GROWTH	CUSHION FACTOR*	CUSHION IN 1993	ANNUAL GROWTH (94-97)	PROJECTED STAFFING IN 1993
Bophuthatswana	403	223	179.8	0.4	71.9	27.0	295
Ciskei	202	41	160.8	0.4	64.3	24.1	105
Gazankulu	224	119	104.8	0.4	41.9	15.7	161
KaNgwane	159	49	110.3	0.4	44.1	16.5	93
Lebowa	652	66	586.3	0.4	234.5	88.0	301
Transkei	816	172	643.7	0.4	257.5	96.5	430
Venda	163	55	107.8	0.4	43.1	16.2	98
TYPE X TOTAL:	2618	725	1893		757	284	1482
Delegates	118	113	5.3	0.3	1.6	0.9	115
DET (Type Y)	1042	1078	-36.3	0.3	-10.9	-6.4	1067
KwaNdebele	99	92	7.1	0.3	2.1	1.2	94
KwaZulu	1082	351	730.9	0.3	219.3	127.9	570
Natal (Assembly)	61	89	-28.1	0.3	-8.4	-4.9	81
QwaQwa	75	64	11.1	0.3	3.3	2.0	67
Transvaal (Assembly)	305	642	-337.0	0.3	-101.1	-59.0	541
TYPE Y TOTAL:	2782	2429	353		106	62	2535
Cape (Assembly)	126	216	-90.2	0.2	-18.0	-18.0	198
DET (Type Z)	538	557	-19.3	0.2	-3.9	-3.8	553
OFS (Assembly)	41	63	-21.6	0.2	-4.3	-4.3	59
Representatives	440	311	128.9	0.2	25.8	25.8	337
TYPE Z TOTAL:	1145	1147	-2		-0	-0	1147
REGIONAL SUBTOTAL:	6545	4301	2244		863	345	5164
MINISTRY HEAD OFFICE:	982	704	278	0.4	111	42	815
GRAND TOTAL:	7527	5005	2522		974	387	5979

TABLE 6.9d: STAFFING CUSHION - COMPREHENSIVE MODEL: CLERICAL CATEGORY

DEPARTMENTS BY REGIONAL TYPE	PROJECTED STAFFING THRU 1997	CURRENT STAFFING (1992)	PROJECTED GROWTH	CUSHION FACTOR*	CUSHION IN 1993	ANNUAL GROWTH (94-97)	PROJECTED STAFFING IN 1993
Bophuthatswana	844	98	746.4	0.4	298.6	112.0	397
Ciskei	423	135	288.1	0.4	115.3	43.2	250
Gazankulu	469	504	-34.9	0.4	-14.0	-5.2	490
KaNgwane	334	47	286.9	0.4	114.7	43.0	162
Lebowa	1368	94	1273.6	0.4	509.4	191.0	603
Transkei	1710	328	1382.0	0.4	552.8	207.3	881
Venda	341	70	271.3	0.4	108.5	40.7	179
TYPE X TOTAL:	5489	1276	4213		1685	632	2961
Delegates	248	89	159.1	0.3	47.7	27.8	137
DET (Type Y)	2184	1221	962.7	0.3	288.8	168.5	1510
KwaNdebele	208	68	139.7	0.3	41.9	24.5	110
KwaZulu	2268	128	2140.2	0.3	642.0	374.5	770
Natal (Assembly)	128	173	-45.3	0.3	-13.6	-7.9	159
QwaQwa	158	33	124.5	0.3	37.4	21.8	70
Transvaal (Assembly)	639	639	0.4	0.3	0.1	0.1	639
TYPE Y TOTAL:	5832	2351	3481		1044	609	3395
Cape (Assembly)	264	289	-25.2	0.2	-5.0	-5.0	284
DET (Type Z)	1127	630	497.3	0.2	99.5	99.5	730
OFS (Assembly)	87	100	-13.1	0.2	-2.6	-2.6	97
Representatives	922	207	715.2	0.2	143.0	143.0	350
TYPE Z TOTAL:	2400	1226	1174		235	235	1461
REGIONAL SUBTOTAL:	13722	4853	8869		2965	1476	7817
MINISTRY HEAD OFFICE:	1372	730	642	0.4	257	96	987
GRAND TOTAL:	15094	5583	9511		3221	1573	8804

* Refer to Section 2 for explanation of Cushion and Anti-Cushion factors

TABLE 6.9e: STAFFING CUSHION - SELECTIVE MODEL: EXECUTIVE CATEGORY

DEPARTMENTS BY REGIONAL TYPE	PROJECTED STAFFING THRU 1997	CURRENT STAFFING (1992)	PROJECTED GROWTH	ANTI-CUSHION FACTOR*	NEW POSITIONS (93-97)	NEW POSITIONS 1993	ANNUAL GROWTH (94-97)	PROJECTED STAFFING IN 1993
Bophuthatswana	9	2	6.8	0.6	4	0.8	0.8	3
Ciskei	4	5	-0.6	0.6	-0	-0.1	-0.1	5
Gazankulu	5	1	3.9	0.6	2	0.5	0.5	2
KaNgwane	3	0	3.5	0.6	2	0.4	0.4	0
Lebowa	14	1	13.2	0.6	8	1.6	1.6	3
Transkei	18	9	8.8	0.6	5	1.1	1.1	10
Venda	4	2	1.5	0.6	1	0.2	0.2	2
TYPE X TOTAL:	57	20	37		22	5	5	25
Delegates	3	3	0.1	0.4	0	0.0	0.0	3
DET (Type Y)	23	7	15.7	0.4	6	1.3	1.3	8
KwaNdebele	2	0	2.2	0.4	1	0.2	0.2	0
KwaZulu	24	5	18.6	0.4	7	1.5	1.5	7
Natal (Assembly)	2	2	-0.4	0.4	-0	0.0	0.0	2
QwaQwa	2	0	1.6	0.4	1	0.1	0.1	0
Transvaal (Assembly)	8	3	5.0	0.4	2	0.4	0.4	3
TYPE Y TOTAL:	63	20	43		17	4	4	24
Cape (Assembly)	3	3	0.3	0.2	0	0.0	0.0	3
DET (Type Z)	12	4	7.7	0.2	2	0.3	0.3	4
OFS (Assembly)	1	2	-0.9	0.2	-0	0.0	0.0	2
Representatives	12	2	9.7	0.2	2	0.4	0.4	2
TYPE Z TOTAL:	28	11	17		3	1	1	12
REGIONAL SUBTOTAL:	148	51	97		43	9	9	60
MINISTRY HEAD OFFICE:	70	19	51	0.4	51	20	8	39
GRAND TOTAL:	217	70	147		93	29	17	99

TABLE 6.9f: STAFFING CUSHION - SELECTIVE MODEL: MIDDLE CATEGORY

DEPARTMENTS BY REGIONAL TYPE	PROJECTED STAFFING THRU 1997	CURRENT STAFFING (1992)	PROJECTED GROWTH	ANTI-CUSHION FACTOR*	NEW POSITIONS (93-97)	NEW POSITIONS 1993	ANNUAL GROWTH (94-97)	PROJECTED STAFFING IN 1993
Bophuthatswana	143	52	91.2	0.6	55	10.9	10.9	63
Ciskei	72	12	59.8	0.6	36	7.2	7.2	19
Gazankulu	80	28	51.6	0.6	31	6.2	6.2	34
KaNgwane	57	14	42.6	0.6	26	5.1	5.1	19
Lebowa	232	18	214.0	0.6	128	25.7	25.7	44
Transkei	290	85	205.0	0.6	123	24.6	24.6	110
Venda	58	14	43.9	0.6	26	5.3	5.3	19
TYPE X TOTAL:	931	223	708		425	85	85	308
Delegates	51	49	2.3	0.4	1	0.2	0.2	49
DET (Type Y)	370	303	67.4	0.4	27	5.4	5.4	308
KwaNdebele	35	17	18.2	0.4	7	1.5	1.5	19
KwaZulu	385	97	287.7	0.4	115	23.0	23.0	120
Natal (Assembly)	26	36	-9.9	0.4	-4	-0.8	-0.8	35
QwaQwa	27	13	13.7	0.4	6	1.1	1.1	14
Transvaal (Assembly)	131	145	-14.2	0.4	-6	-1.1	-1.1	144
TYPE Y TOTAL:	1025	660	365		146	29	29	689
Cape (Assembly)	54	78	-24.0	0.2	-5	-1.0	-1.0	77
DET (Type Z)	191	156	35.2	0.2	7	1.4	1.4	157
OFS (Assembly)	18	33	-15.2	0.2	-3	-0.6	-0.6	32
Representatives	191	162	28.7	0.2	6	1.1	1.1	163
TYPE Z TOTAL:	454	429	25		5	1	1	430
REGIONAL SUBTOTAL:	2410	1312	1098		576	115	115	1427
MINISTRY HEAD OFFICE:	568	251	317	0.4	317	127	47	378
GRAND TOTAL:	2978	1563	1415		892	242	162	1805

* Refer to Section 2 for explanation of Cushion and Anti-Cushion factors

TABLE 6.9g: STAFFING CUSHION - SELECTIVE MODEL: SUPERVISORY CATEGORY

DEPARTMENTS BY REGIONAL TYPE	PROJECTED STAFFING THRU 1997	CURRENT STAFFING (1992)	PROJECTED GROWTH	ANTI-CUSHION FACTOR*	NEW POSITIONS (93-97)	NEW POSITIONS 1993	ANNUAL GROWTH (94-97)	PROJECTED STAFFING IN 1993
Bophuthatswana	330	223	107.3	0.6	64	12.9	12.9	236
Ciskei	166	41	124.5	0.6	75	14.9	14.9	56
Gazankulu	183	119	64.5	0.6	39	7.7	7.7	127
KaNgwane	131	49	81.6	0.6	49	9.8	9.8	59
Lebowa	535	66	468.9	0.6	281	56.3	56.3	122
Transkei	669	172	496.9	0.6	298	59.6	59.6	232
Venda	133	55	78.5	0.6	47	9.4	9.4	64
TYPE X TOTAL:	2147	725	1422		853	171	171	896
Delegates	118	113	5.3	0.4	2	0.4	0.4	113
DET (Type Y)	854	1078	-223.8	0.4	-90	-17.9	-17.9	1060
KwaNdebele	81	92	-10.7	0.4	-4	-0.9	-0.9	91
KwaZulu	887	351	536.2	0.4	215	42.9	42.9	394
Natal (Assembly)	60	89	-28.8	0.4	-12	-2.3	-2.3	87
QwaQwa	62	64	-2.4	0.4	-1	-0.2	-0.2	64
Transvaal (Assembly)	302	642	-340.4	0.4	-136	-27.2	-27.2	615
TYPE Y TOTAL:	2364	2429	-65		-26	-5	-5	2424
Cape (Assembly)	124	216	-91.6	0.2	-18	-3.7	-3.7	212
DET (Type Z)	441	557	-116.0	0.2	-23	-4.6	-4.6	552
OFS (Assembly)	41	63	-22.0	0.2	-4	-0.9	-0.9	62
Representatives	440	311	128.9	0.2	26	5.2	5.2	316
TYPE Z TOTAL:	1046	1147	-101		-20	-4	-4	1143
REGIONAL SUBTOTAL:	5558	4301	1257		808	161	161	4462
MINISTRY HEAD OFFICE:	982	704	278	0.4	278	111	42	815
GRAND TOTAL:	6540	5005	1535		1085	272	203	5277

TABLE 6.9h: STAFFING CUSHION - SELECTIVE MODEL: CLERICAL CATEGORY

DEPARTMENTS BY REGIONAL TYPE	PROJECTED STAFFING THRU 1997	CURRENT STAFFING (1992)	PROJECTED GROWTH	ANTI-CUSHION FACTOR*	NEW POSITIONS (93-97)	NEW POSITIONS 1993	ANNUAL GROWTH (94-97)	PROJECTED STAFFING IN 1993
Bophuthatswana	692	98	594.5	0.6	357	71.3	71.3	169
Ciskei	347	135	212.0	0.6	127	25.4	25.4	160
Gazankulu	385	504	-119.3	0.6	-72	-14.3	-14.3	490
KaNgwane	274	47	226.8	0.6	136	27.2	27.2	74
Lebowa	1121	94	1027.4	0.6	617	123.3	123.3	217
Transkei	1402	328	1074.2	0.6	645	128.9	128.9	457
Venda	280	70	209.8	0.6	126	25.2	25.2	95
TYPE X TOTAL:	4501	1276	3225		1935	387	387	1663
Delegates	248	89	159.1	0.4	64	12.7	12.7	102
DET (Type Y)	1791	1221	569.7	0.4	228	45.6	45.6	1267
KwaNdebele	170	68	102.3	0.4	41	8.2	8.2	76
KwaZulu	1860	128	1731.9	0.4	693	138.6	138.6	267
Natal (Assembly)	126	173	-46.8	0.4	-19	-3.7	-3.7	169
QwaQwa	129	33	96.2	0.4	39	7.7	7.7	41
Transvaal (Assembly)	632	639	-6.7	0.4	-3	-0.5	-0.5	639
TYPE Y TOTAL:	4957	2351	2606		1042	209	209	2560
Cape (Assembly)	261	289	-28.1	0.2	-6	-1.1	-1.1	288
DET (Type Z)	924	630	294.4	0.2	59	11.8	11.8	642
OFS (Assembly)	86	100	-14.1	0.2	-3	-0.6	-0.6	99
Representatives	922	207	715.2	0.2	143	28.6	28.6	236
TYPE Z TOTAL:	2193	1226	967		194	39	39	1265
REGIONAL SUBTOTAL:	11651	4853	6798		3171	634	634	5487
MINISTRY HEAD OFFICE:	1372	730	642	0.4	642	257	96	987
GRAND TOTAL:	13024	5583	7441		3813	891	730	6474

* Refer to Section 2 for explanation of Cushion and Anti-Cushion factors

TABLE 6.9i: STAFFING CUSHION - MIXED MODEL: EXECUTIVE CATEGORY

DEPARTMENTS BY REGIONAL TYPE	PROJECTED STAFFING THRU 1997	CURRENT STAFFING (1992)	PROJECTED GROWTH	ANTI-CUSHION FACTOR*	NEW POSITIONS (93-97)	NEW POSITIONS 1993	ANNUAL GROWTH (94-97)	PROJECTED STAFFING IN 1993
Bophuthatswana	9	2	6.8	0.6	4.1	0.8	0.8	3
Ciskei	4	5	-0.6	0.6	-0.4	-0.1	-0.1	5
Gazankulu	5	1	3.9	0.6	2.3	0.5	0.5	2
KaNgwane	3	0	3.5	0.6	2.1	0.4	0.4	0
Lebowa	14	1	13.2	0.6	7.9	1.6	1.6	3
Transkei	18	9	8.8	0.6	5.3	1.1	1.1	10
Venda	4	2	1.5	0.6	0.9	0.2	0.2	2
TYPE X TOTAL:	57	20	37		22	5	5	25
Delegates	3	3	0.1	1.0	0.1	0.0	0.0	3
DET (Type Y)	24	7	16.7	1.0	16.7	3.3	3.3	10
KwaNdebele	2	0	2.2	1.0	2.2	0.4	0.4	0
KwaZulu	24	5	18.6	1.0	18.6	3.7	3.7	9
Natal (Assembly)	2	2	-0.4	1.0	-0.4	-0.1	-0.1	2
QwaQwa	2	0	1.6	1.0	1.6	0.3	0.3	0
Transvaal (Assembly)	8	3	5.1	1.0	5.1	1.0	1.0	4
TYPE Y TOTAL:	64	20	44		44	9	9	29
Cape (Assembly)	3	3	0.3	0.6	0.2	0.0	0.0	3
DET (Type Z)	12	4	8.2	0.6	4.9	1.0	1.0	5
OFS (Assembly)	1	2	-0.9	0.6	-0.5	-0.1	-0.1	2
Representatives	12	2	9.7	0.6	6	1.2	1.2	3
TYPE Z TOTAL:	28	11	17		10	2	2	13
REGIONAL SUBTOTAL:	149	51	98		77	15	15	66
MINISTRY HEAD OFFICE:	70	19	51	0.4	51	20	8	39
GRAND TOTAL:	219	70	149		127	35	23	105

TABLE 6.9j: STAFFING CUSHION - MIXED MODEL: MIDDLE MANAGEMENT CATEGORY

DEPARTMENTS BY REGIONAL TYPE	PROJECTED STAFFING THRU 1997	CURRENT STAFFING (1992)	PROJECTED GROWTH	ANTI-CUSHION FACTOR*	NEW POSITIONS (93-97)	NEW POSITIONS 1993	ANNUAL GROWTH (94-97)	PROJECTED STAFFING IN 1993
Bophuthatswana	143	52	91.2	0.6	55	10.9	10.9	63
Ciskei	72	12	59.8	0.6	36	7.2	7.2	19
Gazankulu	80	28	51.6	0.6	31	6.2	6.2	34
KaNgwane	57	14	42.6	0.6	26	5.1	5.1	19
Lebowa	232	18	214.0	0.6	128	25.7	25.7	44
Transkei	290	85	205.0	0.6	123	24.6	24.6	110
Venda	58	14	43.9	0.6	26	5.3	5.3	19
TYPE X TOTAL:	931	223	708		425	85	85	308
Delegates	51	49	2.3	1.0	2	0.5	0.5	50
DET (Type Y)	387	303	84.1	1.0	84	16.8	16.8	320
KwaNdebele	35	17	18.2	1.0	18	3.6	3.6	21
KwaZulu	385	97	287.7	1.0	288	57.5	57.5	155
Natal (Assembly)	26	36	-9.7	1.0	-10	-1.9	-1.9	34
QwaQwa	27	13	13.7	1.0	14	2.7	2.7	16
Transvaal (Assembly)	132	145	-13.2	1.0	-13	-2.6	-2.6	142
TYPE Y TOTAL:	1043	660	383		383	77	77	737
Cape (Assembly)	54	78	-23.6	0.6	-14	-2.8	-2.8	75
DET (Type Z)	200	156	43.8	0.6	26	5.3	5.3	161
OFS (Assembly)	18	33	-15.1	0.6	-9	-1.8	-1.8	31
Representatives	191	162	28.7	0.6	17	3.4	3.4	165
TYPE Z TOTAL:	463	429	34		20	4	4	433
REGIONAL SUBTOTAL:	2437	1312	1125		828	166	166	1478
MINISTRY HEAD OFFICE:	568	251	317	0.4	317	127	47	378
GRAND TOTAL:	3005	1563	1442		1145	293	213	1856

* Refer to Section 2 for expianation of Cushion and Anti-Cushion factors

TABLE 6.9k: STAFFING CUSHION - MIXED MODEL: SUPERVISORY CATEGORY

DEPARTMENTS BY REGIONAL TYPE	PROJECTED STAFFING THRU 1997	CURRENT STAFFING (1992)	PROJECTED GROWTH	ANTI-CUSHION FACTOR*	NEW POSITIONS (93-97)	NEW POSITIONS 1993	ANNUAL GROWTH (94-97)	PROJECTED STAFFING IN 1993
Bophuthatswana	330	223	107.3	0.6	64	12.9	12.9	236
Ciskei	166	41	124.5	0.6	75	14.9	14.9	56
Gazankulu	183	119	64.5	0.6	39	7.7	7.7	127
KaNgwane	131	49	81.6	0.6	49	9.8	9.8	59
Lebowa	535	66	468.9	0.6	281	56.3	56.3	122
Transkei	669	172	496.9	0.6	298	59.6	59.6	232
Venda	133	55	78.5	0.6	47	9.4	9.4	64
TYPE X TOTAL:	2147	725	1422		853	171	171	896
Delegates	118	113	5.3	1.0	5	1.1	1.1	114
DET (Type Y)	893	1078	-185.2	1.0	-185	-37.0	-37.0	1041
KwaNdebele	81	92	-10.7	1.0	-11	-2.1	-2.1	90
KwaZulu	887	351	536.2	1.0	536	107.2	107.2	458
Natal (Assembly)	61	89	-28.3	1.0	-28	-5.7	-5.7	83
QwaQwa	62	64	-2.4	1.0	-2	-0.5	-0.5	64
Transvaal (Assembly)	304	642	-338.1	1.0	-338	-67.6	-67.6	574
TYPE Y TOTAL:	2406	2429	-23		-23	-5	-5	2424
Cape (Assembly)	125	216	-90.6	0.6	-54	-10.9	-10.9	205
DET (Type Z)	461	557	-96.1	0.6	-58	-11.5	-11.5	546
OFS (Assembly)	41	63	-21.7	0.6	-13	-2.6	-2.6	60
Representatives	440	311	128.9	0.6	77	15.5	15.5	327
TYPE Z TOTAL:	1067	1147	-80		-48	-10	-10	1138
REGIONAL SUBTOTAL:	5620	4301	1319		782	157	157	4458
MINISTRY HEAD OFFICE:	982	704	278	0.4	278	111	42	815
GRAND TOTAL:	6602	5005	1597		1060	268	199	5273

TABLE 6.9l: STAFFING CUSHION - MIXED MODEL: CLERICAL CATEGORY

DEPARTMENTS BY REGIONAL TYPE	PROJECTED STAFFING THRU 1997	CURRENT STAFFING (1992)	PROJECTED GROWTH	ANTI-CUSHION FACTOR*	NEW POSITIONS (93-97)	NEW POSITIONS 1993	ANNUAL GROWTH (94-97)	PROJECTED STAFFING IN 1993
Bophuthatswana	692	98	594.5	0.6	357	71.3	71.3	169
Ciskei	347	135	212.0	0.6	127	25.4	25.4	160
Gazankulu	385	504	-119.3	0.6	-72	-14.3	-14.3	490
KaNgwane	274	47	226.8	0.6	136	27.2	27.2	74
Lebowa	1121	94	1027.4	0.6	617	123.3	123.3	217
Transkei	1402	328	1074.2	0.6	645	128.9	128.9	457
Venda	280	70	209.8	0.6	126	25.2	25.2	95
TYPE X TOTAL:	4501	1276	3225		1935	387	387	1663
Delegates	248	89	159.1	1.0	159	31.8	31.8	121
DET (Type Y)	1872	1221	650.6	1.0	651	130.1	130.1	1351
KwaNdebele	170	68	102.3	1.0	102	20.5	20.5	89
KwaZulu	1860	128	1731.9	1.0	1732	346.4	346.4	474
Natal (Assembly)	127	173	-45.8	1.0	-46	-9.2	-9.2	164
QwaQwa	129	33	96.2	1.0	96	19.2	19.2	52
Transvaal (Assembly)	637	639	-1.9	1.0	-2	-0.4	-0.4	639
TYPE Y TOTAL:	5043	2351	2692		2692	538	538	2889
Cape (Assembly)	263	289	-26.2	0.6	-16	-3.1	-3.1	286
DET (Type Z)	966	630	336.2	0.6	202	40.3	40.3	670
OFS (Assembly)	87	100	-13.4	0.6	-8	-1.6	-1.6	98
Representatives	922	207	715	0.6	429	85.8	85.8	293
TYPE Z TOTAL:	2238	1226	1012		607	121	121	1347
REGIONAL SUBTOTAL:	11782	4853	6929		5235	1047	1047	5900
MINISTRY HEAD OFFICE:	1372	730	642	0.4	642	257	96	987
GRAND TOTAL:	13155	5583	7572		5877	1304	1143	6887

* Refer to Section 2 for explanation of Cushion and Anti-Cushion factors

TABLE 6.9m: STAFFING CUSHION SUMMARY - COMPREHENSIVE MODEL							
DEPARTMENT	EXECUTIVE	MIDDLE MANAGEMENT	SUPERVISORY	CLERICAL	TOTAL STAFFING CUSHION	CSL	PROJECTED STAFFING INCREASE
REGION X	40	588	1482	2961	5071	2244	2827
REGION Y	36	824	2535	3395	6790	5460	1330
REGION Z	15	442	1147	1461	3065	2813	252
REGION SUBTOTAL	91	1854	5164	7817	14926	10517	4409
MINISTRY HEAD OFFICE	39	378	815	987	2219	1704	515
TOTAL	130	2232	5979	8804	17145		
CURRENT STAFFING LEVELS	70	1563	5005	5583	12221		
PER CENT INCREASE	86%	43%	19%	58%	40%		

TABLE 6.9n: STAFFING CUSHION SUMMARY - MIXED MODEL							
DEPARTMENT	EXECUTIVE	MIDDLE MANAGEMENT	SUPERVISORY	CLERICAL	TOTAL STAFFING CUSHION	CSL	PROJECTED STAFFING INCREASE
REGION X	25	308	896	1663	2891	2244	647
REGION Y	29	737	2424	2889	6079	5460	619
REGION Z	13	433	1138	1347	2931	2813	118
REGION SUBTOTAL	67	1478	4458	5899	11901	10517	1384
MINISTRY HEAD OFFICE	39	378	815	987	2219	1704	515
TOTAL	106	1856	5273	6886	14120		
CURRENT STAFFING LEVELS	70	1563	5005	5583	12221		
PER CENT INCREASE	51%	19%	5%	23%	16%		

TABLE 6.9o: STAFFING CUSHION SUMMARY - SELECTIVE MODEL							
DEPARTMENT	EXECUTIVE	MIDDLE MANAGEMENT	SUPERVISORY	CLERICAL	TOTAL STAFFING CUSHION	CSL	PROJECTED STAFFING INCREASE
REGION X	25	308	896	1663	2891	2244	647
REGION Y	24	689	2424	2560	5696	5460	236
REGION Z	12	430	1143	1265	2849	2813	36
REGION SUBTOTAL	61	1427	4463	5488	11439	10517	922
MINISTRY HEAD OFFICE	39	378	815	987	2219	1704	515
TOTAL	100	1805	5278	6475	13658		
CURRENT STAFFING LEVELS	70	1563	5005	5583	12221		
PER CENT INCREASE	41%	15%	5%	16%	12%		

TABLE 6.10a: IMPACT OF OPTIMISTIC SCENARIO ON STAFF EXODUS EXECUTIVES						
DEPARTMENT	CURRENT STAFFING	EXODUS FACTOR	REMAINING STAFF	PROJECTED STAFFING IN 1993	1993 STAFFING GAP	EXODUS GAP
Bophuthatswana	2	0.05	1.9	5.5	3.6	0.1
Ciskei	5	0.05	4.8	5.1	0.3	0.2
Gazankulu	1	0.05	1.0	3.0	2.0	0.0
KaNgwane	0	0.05	0.0	1.7	1.7	0.0
Lebowa	1	0.05	1.0	7.5	6.5	0.0
Transkei	9	0.05	8.6	14.1	5.5	0.4
Venda	2	0.05	1.9	2.9	1.0	0.1
TYPE X TOTAL:	20		19.2	39.8	20.6	0.8
Delegates	3	0.05	2.9	3.0	0.1	0.1
DET (Type Y)	7	0.30	4.9	13.2	8.3	2.1
KwaNdebele	0	0.05	0.0	0.8	0.8	0.0
KwaZulu	5	0.05	4.8	12.1	7.3	0.2
Natal (Assembly)	2	0.30	1.4	1.9	0.5	0.6
QwaQwa	0	0.05	0.0	0.6	0.6	0.0
Transvaal (Assembly)	3	0.30	2.1	4.5	2.4	0.9
TYPE Y TOTAL:	20		16.1	36.1	20.0	3.9
Cape (Assembly)	3	0.30	2.1	3.1	1.0	0.9
DET (Type Z)	4	0.30	2.8	6.1	3.3	1.2
OFS (Assembly)	2	0.30	1.4	1.8	0.4	0.6
Representatives	2	0.30	1.4	3.9	2.5	0.6
TYPE Z TOTAL:	11		7.7	14.9	7.2	3.3
REGIONAL SUBTOTAL:	51		43.0	90.8	47.8	8.0
DNE	5	0.00	5.0			
DET	7	0.30	4.9			
ASSEMBLY	7	0.30	4.9			
MINISTRY HEAD OFFICE:	19		14.8	39.2	24.4	4.2
GRAND TOTAL:	70		57.8	130.0	72.2	12.2

TABLE 6.10b: IMPACT OF OPTIMISTIC SCENARIO ON STAFF EXODUS MIDDLE MANAGEMENT						
DEPARTMENT	CURRENT STAFFING	EXODUS FACTOR	REMAINING STAFF	PROJECTED STAFFING IN 1993	1993 STAFFING GAP	EXODUS GAP
Bophuthatswana	52	0.05	49.4	101.1	51.7	2.6
Ciskei	12	0.05	11.4	42.2	30.8	0.6
Gazankulu	28	0.05	26.6	55.6	29.0	1.4
KaNgwane	14	0.05	13.3	36.0	22.7	0.7
Lebowa	18	0.05	17.1	124.0	106.9	0.9
Transkei	85	0.05	80.8	192.5	111.7	4.2
Venda	14	0.05	13.3	36.6	23.3	0.7
TYPE X TOTAL:	223		211.9	588.0	376.1	11.1
Delegates	49	0.05	46.6	49.7	3.1	2.4
DET (Type Y)	303	0.30	212.1	347.6	135.5	90.9
KwaNdebele	17	0.05	16.2	24.8	8.6	0.8
KwaZulu	97	0.05	92.2	208.6	116.4	4.8
Natal (Assembly)	36	0.05	34.2	33.1	0.0	2.9
QwaQwa	13	0.05	12.4	18.9	6.5	0.6
Transvaal (Assembly)	145	0.05	137.8	141.2	3.4	7.2
TYPE Y TOTAL:	660		551.5	823.9	273.5	109.6
Cape (Assembly)	78	0.05	74.1	73.3	0.0	4.7
DET (Type Z)	156	0.30	109.2	171.4	62.2	46.8
OFS (Assembly)	33	0.05	31.4	30.0	0.0	3
Representatives	162	0.05	153.9	167.7	13.8	8.1
TYPE Z TOTAL:	429		368.6	442.4	76.0	62.6
REGIONAL SUBTOTAL:	1312		1132.0	1854.3	725.6	183.3
DNE	42	0.00	42.0			
DET	129	0.30	90.3			
ASSEMBLY	80	0.05	76.0			
MINISTRY HEAD OFFICE:	251		208.3	377.7	169.4	42.7
GRAND TOTAL:	1563		1340.3	2232.0	895.0	226.0

TABLE 6.10c: IMPACT OF OPTIMISTIC SCENARIO ON STAFF EXODUS

SUPERVISORY

DEPARTMENT	CURRENT STAFFING	EXODUS FACTOR	REMAINING STAFF	PROJECTED STAFFING IN 1993	1993 STAFFING GAP	EXODUS GAP
Bophuthatswana	223	0.05	211.9	294.9	83.0	11.1
Ciskei	41	0.05	39.0	105.3	66.3	2.0
Gazankulu	119	0.05	113.1	160.9	47.8	5.9
KaNgwane	49	0.05	46.6	93.1	46.5	2.4
Lebowa	66	0.05	62.7	300.5	237.8	3.3
Transkei	172	0.05	163.4	429.5	266.1	8.6
Venda	55	0.05	52.3	98.1	45.8	2.7
TYPE X TOTAL:	725		689.0	1482.3	793.3	36.0
Delegates	113	0.05	107.4	114.6	7.2	5.6
DET (Type Y)	1078	0.35	700.7	1067.1	366.4	377.3
KwaNdebele	92	0.05	87.4	94.1	6.7	4.6
KwaZulu	351	0.05	333.5	570.3	236.8	17.5
Natal (Assembly)	89	0.05	84.6	80.6	0.0	4.4
QwaQwa	64	0.05	60.8	67.3	6.5	3.2
Transvaal (Assembly)	642	0.05	609.9	540.9	0.0	32.1
TYPE Y TOTAL:	2429		1984.3	2534.9	623.6	444.7
Cape (Assembly)	216	0.05	205.2	198.0	0.0	10.8
DET (Type Z)	557	0.35	362.1	553.1	191.0	194.9
OFS (Assembly)	63	0.05	59.9	58.7	0.0	3.1
Representatives	311	0.05	295.5	336.8	41.3	15.5
TYPE Z TOTAL:	1147		922.7	1146.6	232.3	224.3
REGIONAL SUBTOTAL:	4301		3596.0	5163.8	1649.2	705.0
DNE	7	0.00	7.0			
DET	434	0.35	282.1			
ASSEMBLY	263	0.05	249.9			
MINISTRY HEAD OFFICE:	704		539.0	815.1	276.1	165.0
GRAND TOTAL:	5005		4135.0	5978.9	1925.3	870.0

TABLE 6.10d: IMPACT OF OPTIMISTIC SCENARIO ON STAFF EXODUS

CLERICAL

DEPARTMENT	CURRENT STAFFING	EXODUS FACTOR	REMAINING STAFF	PROJECTED STAFFING IN 1993	1993 STAFFING GAP	EXODUS GAP
Bophuthatswana	98	0.05	93.1	396.6	303.5	4.9
Ciskei	135	0.05	128.3	250.3	122.0	6.7
Gazankulu	504	0.05	478.8	490.0	11.2	25.2
KaNgwane	47	0.05	44.7	161.7	117.0	2.3
Lebowa	94	0.05	89.3	603.4	514.1	4.7
Transkei	328	0.05	311.6	880.8	569.2	16.4
Venda	70	0.05	66.5	178.5	112.0	3.5
TYPE X TOTAL:	1276		1212.3	2961.3	1749.0	63.7
Delegates	89	0.05	84.6	136.7	52.1	4.4
DET (Type Y)	1221	0.35	793.7	1509.8	716.1	427.3
KwaNdebele	68	0.05	64.6	109.9	45.3	3.4
KwaZulu	128	0.05	121.6	770.0	648.4	6.4
Natal (Assembly)	173	0.05	164.4	159.4	0.0	8.6
QwaQwa	33	0.05	31.4	70.4	39.0	1.6
Transvaal (Assembly)	639	0.05	607.1	639.1	32.0	31.9
TYPE Y TOTAL:	2351		1867.4	3395.3	1532.9	483.6
Cape (Assembly)	289	0.05	274.6	284.0	9.4	14.4
DET (Type Z)	630	0.35	409.5	729.5	320.0	220.5
OFS (Assembly)	100	0.05	95.0	97.4	2.4	5.0
Representatives	207	0.05	196.7	350.0	153.3	10.3
TYPE Z TOTAL:	1226		975.8	1460.9	485.1	250.2
REGIONAL SUBTOTAL:	4853		4055.5	7817.5	3767.0	797.5
DNE	11	0.00	11.0			
DET	434	0.35	282.1			
ASSEMBLY	285	0.05	270.8			
MINISTRY HEAD OFFICE:	730		563.9	986.9	423.0	166.1
GRAND TOTAL:	5583		4619.4	8804.4	4190.0	963.6

TABLE 6.10e: IMPACT OF PESSIMISTIC SCENARIO ON STAFF EXODUS
EXECUTIVES

DEPARTMENT	CURRENT STAFFING	EXODUS FACTOR	REMAINING STAFF	PROJECTED STAFFING IN 1993	1993 STAFFING GAP	EXODUS GAP
Bophuthatswana	2	0.05	1.9	2.8	0.9	0.1
Ciskei	5	0.05	4.8	4.9	0.1	0.2
Gazankulu	1	0.05	1.0	1.5	0.5	0.0
KaNgwane	0	0.05	0.0	0.4	0.4	0.0
Lebowa	1	0.05	1.0	2.6	1.6	0.0
Transkei	9	0.05	8.6	10.1	1.5	0.4
Venda	2	0.05	1.9	2.2	0.3	0.1
TYPE X TOTAL:	20		19.2	24.5	5.3	0.8
Delegates	3	0.05	2.9	3.0	0.1	0.1
DET (Type Y)	7	0.50	3.5	8.3	4.8	3.5
KwaNdebele	0	0.05	0.0	0.2	0.2	0.0
KwaZulu	5	0.05	4.8	6.5	1.7	0.2
Natal (Assembly)	2	0.50	1.0	2.0	1.0	1.0
QwaQwa	0	0.05	0.0	0.1	0.1	0.0
Transvaal (Assembly)	3	0.50	1.5	3.4	1.9	1.5
TYPE Y TOTAL:	20		13.7	23.5	9.8	6.3
Cape (Assembly)	3	0.50	1.5	3.0	1.5	1.5
DET (Type Z)	4	0.50	2.0	4.3	2.3	2.0
OFS (Assembly)	2	0.50	1.0	2.0	1.0	1.0
Representatives	2	0.50	1.0	2.4	1.4	1.0
TYPE Z TOTAL:	11		5.5	11.7	6.2	5.5
REGIONAL SUBTOTAL:	51		38.4	59.7	21.3	12.6
DNE	5	0.00	5.0			
DET	7	0.50	3.5			
ASSEMBLY	7	0.50	3.5			
MINISTRY HEAD OFFICE:	19		12.0	39.0	27.0	7.0
GRAND TOTAL:	70		50.4	98.7	48.3	19.6

TABLE 6.10f: IMPACT OF PESSIMISTIC SCENARIO ON STAFF EXODUS
MIDDLE MANAGEMENT

DEPARTMENT	CURRENT STAFFING	EXODUS FACTOR	REMAINING STAFF	PROJECTED STAFFING IN 1993	1993 STAFFING GAP	EXODUS GAP
Bophuthatswana	52	0.05	49.4	62.9	13.5	2.6
Ciskei	12	0.05	11.4	19.2	7.8	0.6
Gazankulu	28	0.05	26.6	34.2	7.6	1.4
KaNgwane	14	0.05	13.3	19.1	5.8	0.7
Lebowa	18	0.05	17.1	43.7	26.6	0.9
Transkei	85	0.05	80.8	109.6	28.8	4.2
Venda	14	0.05	13.3	19.3	6.0	0.7
TYPE X TOTAL:	223		211.9	308.0	96.1	11.1
Delegates	49	0.05	46.6	49.2	2.6	2.4
DET (Type Y)	303	0.50	151.5	308.4	156.9	151.5
KwaNdebele	17	0.05	16.2	18.5	2.3	0.8
KwaZulu	97	0.05	92.2	120.0	27.8	4.8
Natal (Assembly)	36	0.40	21.6	35.2	13.6	14.4
QwaQwa	13	0.05	12.4	14.1	1.7	0.6
Transvaal (Assembly)	145	0.40	87.0	143.9	56.9	58.0
TYPE Y TOTAL:	660		427.5	689.3	261.8	232.5
Cape (Assembly)	78	0.40	46.8	77.0	30.2	31.2
DET (Type Z)	156	0.50	78.0	157.4	79.4	78.0
OFS (Assembly)	33	0.40	19.8	32.4	12.6	13.2
Representatives	162	0.40	97.2	163.1	65.9	64.8
TYPE Z TOTAL:	429		241.8	429.9	188.1	187.2
REGIONAL SUBTOTAL:	1312		881.2	1427.2	546.0	430.8
DNE	42	0.00	42.0			
DET	129	0.50	64.5			
ASSEMBLY	80	0.40	48.0			
MINISTRY HEAD OFFICE:	251		154.5	378.0	223.5	96.5
GRAND TOTAL:	1563		1035.7	1805.2	769.5	527.3

TABLE 6.10g: IMPACT OF PESSIMISTIC SCENARIO ON STAFF EXODUS

SUPERVISORY

DEPARTMENT	CURRENT STAFFING	EXODUS FACTOR	REMAINING STAFF	PROJECTED STAFFING IN 1993	1993 STAFFING GAP	EXODUS GAP
Bophuthatswana	223	0.05	211.9	235.9	24.0	11.1
Ciskei	41	0.05	39.0	55.9	16.9	2.0
Gazankulu	119	0.05	113.1	126.7	13.6	5.9
KaNgwane	49	0.05	46.6	58.8	12.2	2.4
Lebowa	66	0.05	62.7	122.3	59.6	3.3
Transkei	172	0.05	163.4	231.6	68.2	8.6
Venda	55	0.05	52.3	64.4	12.1	2.7
TYPE X TOTAL:	725		689.0	895.6	206.6	36.0
Delegates	113	0.05	107.4	113.4	6.0	5.6
DET (Type Y)	1078	0.20	862.4	1060.1	197.7	215.6
KwaNdebele	92	0.05	87.4	91.1	3.7	4.6
KwaZulu	351	0.05	333.5	393.9	60.4	17.5
Natal (Assembly)	89	0.05	84.6	86.7	2.1	4.4
QwaQwa	64	0.05	60.8	63.8	3.0	3.2
Transvaal (Assembly)	642	0.05	609.9	614.8	4.9	32.1
TYPE Y TOTAL:	2429		2146.0	2423.8	277.8	283.0
Cape (Assembly)	216	0.05	205.2	212.3	7.1	10.8
DET (Type Z)	557	0.20	445.6	552.4	106.8	111.4
OFS (Assembly)	63	0.05	59.9	62.1	2.2	3.1
Representatives	311	0.05	295.5	316.2	20.7	15.5
TYPE Z TOTAL:	1147		1006.2	1143.0	136.8	140.8
REGIONAL SUBTOTAL:	4301		3841.2	4462.4	621.2	459.8
DNE	7	0.00	7.0			
DET	434	0.20	347.2			
ASSEMBLY	263	0.05	249.9			
MINISTRY HEAD OFFICE:	704		604.1	811.3	207.2	99.9
GRAND TOTAL:	5005		4445.3	5273.7	828.4	559.7

TABLE 6.10h: IMPACT OF PESSIMISTIC SCENARIO ON STAFF EXODUS

CLERICAL

DEPARTMENT	CURRENT STAFFING	EXODUS FACTOR	REMAINING STAFF	PROJECTED STAFFING IN 1993	1993 STAFFING GAP	EXODUS GAP
Bophuthatswana	98	0.05	93.1	169.3	76.2	4.9
Ciskei	135	0.05	128.3	160.4	32.1	6.7
Gazankulu	504	0.05	478.8	489.7	10.9	25.2
KaNgwane	47	0.05	44.7	74.2	29.5	2.3
Lebowa	94	0.05	89.3	217.3	128.0	4.7
Transkei	328	0.05	311.6	456.9	145.3	16.4
Venda	70	0.05	66.5	95.2	28.7	3.5
TYPE X TOTAL:	1276		1212.3	1663.0	450.7	63.7
Delegates	89	0.05	84.6	101.7	17.1	4.4
DET (Type Y)	1221	0.20	976.8	1266.6	289.8	244.2
KwaNdebele	68	0.05	64.6	76.2	11.6	3.4
KwaZulu	128	0.05	121.6	266.6	145.0	6.4
Natal (Assembly)	173	0.05	164.4	169.3	4.9	8.6
QwaQwa	33	0.05	31.4	40.7	9.3	1.6
Transvaal (Assembly)	639	0.05	607.1	638.5	31.4	31.9
TYPE Y TOTAL:	2351		2050.5	2559.6	509.1	300.5
Cape (Assembly)	289	0.05	274.6	287.9	13.3	14.4
DET (Type Z)	630	0.20	504.0	641.8	137.8	126.0
OFS (Assembly)	100	0.05	95.0	99.4	4.4	5.0
Representatives	207	0.05	196.7	235.6	38.9	10.3
TYPE Z TOTAL:	1226		1070.3	1264.7	194.4	155.7
REGIONAL SUBTOTAL:	4853		4333.1	5487.3	1154.2	519.9
DNE	11	0.00	11.0			
DET	434	0.20	347.2			
ASSEMBLY	285	0.05	270.8			
MINISTRY HEAD OFFICE:	730		629.0	989.0	360.0	101.0
GRAND TOTAL:	5583		4962.1	6476.3	1514.2	620.9

TABLE 6.10i: IMPACT OF MIXED SCENARIO ON STAFF EXODUS EXECUTIVES						
DEPARTMENT	CURRENT STAFFING	EXODUS FACTOR	REMAINING STAFF	PROJECTED STAFFING IN 1993	1993 STAFFING GAP	EXODUS GAP
Bophuthatswana	2	0.05	1.9	2.8	0.9	0.1
Ciskei	5	0.05	4.8	4.9	0.2	0.3
Gazankulu	1	0.05	1.0	1.5	0.6	0.1
KaNgwane	0	0.05	0.0	0.4	0.4	0.0
Lebowa	1	0.05	1.0	2.6	1.7	0.1
Transkei	9	0.05	8.6	10.1	1.5	0.4
Venda	2	0.05	1.9	2.2	0.3	0.1
TYPE X TOTAL:	20		19.0	24.5	5.5	1.0
Delegates	3	0.05	2.9	3.0	0.1	0.1
DET (Type Y)	7	0.40	4.2	10.3	6.1	2.8
KwaNdebele	0	0.05	0.0	0.4	0.4	0.0
KwaZulu	5	0.05	4.8	8.7	3.9	0.3
Natal (Assembly)	2	0.40	1.2	1.9	0.7	0.8
QwaQwa	0	0.05	0.0	0.3	0.3	0.0
Transvaal (Assembly)	3	0.40	1.8	4.0	2.2	1.2
TYPE Y TOTAL:	20		14.8	28.6	13.8	5.2
Cape (Assembly)	3	0.40	1.8	3.0	1.2	1.2
DET (Type Z)	4	0.40	2.4	5.0	2.6	1.6
OFS (Assembly)	2	0.40	1.2	1.9	0.7	0.8
Representatives	2	0.40	1.2	3.2	2.0	0.8
TYPE Z TOTAL:	11		6.6	13.1	6.5	4.4
REGIONAL SUBTOTAL:	51		40.4	66.2	25.8	10.6
DNE	5	0.00	5.0			
DET	7	0.40	4.2			
ASSEMBLY	7	0.40	4.2			
MINISTRY HEAD OFFICE:	19		13.4	39.0	25.6	5.6
GRAND TOTAL:	70		53.8	105.2	51.4	16.2

TABLE 6.10j: IMPACT OF MIXED SCENARIO ON STAFF EXODUS MIDDLE MANAGEMENT						
DEPARTMENT	CURRENT STAFFING	EXODUS FACTOR	REMAINING STAFF	PROJECTED STAFFING IN 1993	1993 STAFFING GAP	EXODUS GAP
Bophuthatswana	52	0.05	49.4	62.9	13.5	2.6
Ciskei	12	0.05	11.4	19.2	7.8	0.6
Gazankulu	28	0.05	26.6	34.2	7.6	1.4
KaNgwane	14	0.05	13.3	19.1	5.8	0.7
Lebowa	18	0.05	17.1	43.7	26.6	0.9
Transkei	85	0.05	80.8	109.6	28.8	4.3
Venda	14	0.05	13.3	19.3	6.0	0.7
TYPE X TOTAL:	223		211.9	308.0	96.2	11.1
Delegates	49	0.05	46.6	49.5	3.0	2.5
DET (Type Y)	303	0.45	166.7	319.8	153.2	136.4
KwaNdebele	17	0.05	16.2	20.6	4.5	0.9
KwaZulu	97	0.05	92.2	154.5	62.4	4.8
Natal (Assembly)	36	0.40	21.6	34.1	12.5	14.4
QwaQwa	13	0.05	12.4	15.7	3.4	0.7
Transvaal (Assembly)	145	0.40	87.0	142.4	55.4	58.0
TYPE Y TOTAL:	660		442.5	736.6	294.2	217.6
Cape (Assembly)	78	0.40	46.8	75.2	28.4	31.2
DET (Type Z)	156	0.45	85.8	161.3	75.5	70.2
OFS (Assembly)	33	0.40	19.8	31.2	11.4	13.2
Representatives	162	0.40	97.2	165.4	68.2	64.8
TYPE Z TOTAL:	429		249.6	433.1	183.5	179.4
REGIONAL SUBTOTAL:	1312		903.9	1477.7	573.8	408.1
DNE	42	0.00	42.0			
DET	129	0.45	71.0			
ASSEMBLY	80	0.40	48.0			
MINISTRY HEAD OFFICE:	251		161.0	377.5	216.6	90.1
GRAND TOTAL:	1563		1064.9	1855.2	790.4	498.2

TABLE 6.10k: IMPACT OF MIXED SCENARIO ON STAFF EXODUS

SUPERVISORY

DEPARTMENT	CURRENT STAFFING	EXODUS FACTOR	REMAINING STAFF	PROJECTED STAFFING IN 1993	1993 STAFFING GAP	EXODUS GAP
Bophuthatswana	223	0.05	211.9	235.9	24.0	11.1
Ciskei	41	0.05	39.0	55.9	16.9	2.0
Gazankulu	119	0.05	113.1	126.7	13.6	5.9
KaNgwane	49	0.05	46.6	58.8	12.2	2.4
Lebowa	66	0.05	62.7	122.3	59.6	3.3
Transkei	172	0.05	163.4	231.6	68.2	8.6
Venda	55	0.05	52.3	64.4	12.1	2.7
TYPE X TOTAL:	725		689.0	895.6	206.6	36.0
Delegates	113	0.05	107.4	114.1	6.7	5.6
DET (Type Y)	1078	0.20	662.4	1041.0	178.6	215.6
KwaNdebele	92	0.05	87.4	89.9	2.5	4.6
KwaZulu	351	0.05	333.5	458.2	124.7	17.5
Natal (Assembly)	89	0.05	84.6	83.3	0.0	4.4
QwaQwa	64	0.05	60.8	63.5	2.7	3.2
Transvaal (Assembly)	642	0.05	609.9	574.4	0.0	32.1
TYPE Y TOTAL:	2429		2146.0	2424.4	315.2	283.0
Cape (Assembly)	216	0.05	205.2	205.1	0.0	10.8
DET (Type Z)	557	0.20	445.6	545.5	99.9	111.4
OFS (Assembly)	63	0.05	59.9	60.4	0.5	3.1
Representatives	311	0.05	295.5	326.5	31.0	15.5
TYPE Z TOTAL:	1147		1006.2	1137.5	131.4	140.8
REGIONAL SUBTOTAL:	4301		3841.2	4457.5	653.2	459.8
DNE	7	0.00	7.0			
DET	434	0.20	347.2			
ASSEMBLY	263	0.05	249.9			
MINISTRY HEAD OFFICE:	704		604.1	815.0	210.9	99.9
GRAND TOTAL:	5005		4445.3	5272.5	864.1	559.7

TABLE 6.10l: IMPACT OF MIXED SCENARIO ON STAFF EXODUS

CLERICAL

DEPARTMENT	CURRENT STAFFING	EXODUS FACTOR	REMAINING STAFF	PROJECTED STAFFING IN 1993	1993 STAFFING GAP	EXODUS GAP
Bophuthatswana	98	0.05	93.1	169.3	76.2	4.9
Ciskei	135	0.05	128.3	160.4	32.1	6.7
Gazankulu	504	0.05	478.8	489.7	10.9	25.2
KaNgwane	47	0.05	44.7	74.2	29.5	2.3
Lebowa	94	0.05	89.3	217.3	128.0	4.7
Transkei	328	0.05	311.6	456.9	145.3	16.4
Venda	70	0.05	66.5	95.2	28.7	3.5
TYPE X TOTAL:	1276		1212.3	1663.0	450.7	63.7
Delegates	89	0.05	84.6	120.8	36.2	4.4
DET (Type Y)	1221	0.20	976.8	1351.1	374.3	244.2
KwaNdebele	68	0.05	64.6	88.5	23.9	3.4
KwaZulu	128	0.05	121.6	474.4	352.8	6.4
Natal (Assembly)	173	0.05	164.4	163.8	0.0	8.6
QwaQwa	33	0.05	31.4	52.2	20.8	1.6
Transvaal (Assembly)	639	0.05	607.1	638.6	31.5	31.9
TYPE Y TOTAL:	2351		2050.5	2889.4	839.5	300.5
Cape (Assembly)	289	0.05	274.6	285.9	11.3	14.4
DET (Type Z)	630	0.20	504.0	670.3	166.3	126.0
OFS (Assembly)	100	0.05	95.0	98.4	3.4	5.0
Representatives	207	0.05	196.7	292.8	96.1	10.3
TYPE Z TOTAL:	1226		1070.3	1347.4	277.1	155.7
REGIONAL SUBTOTAL:	4853		4333.1	5899.8	1567.3	519.9
DNE	11	0.00	11.0			
DET	434	0.20	347.2			
ASSEMBLY	285	0.05	270.8			
MINISTRY HEAD OFFICE:	730		629.0	987.0	358.0	101.0
GRAND TOTAL:	5583		4962.1	6886.8	1925.3	620.9

TABLE 6.10m: IMPACT OF OPTIMISTIC SCENARIO ON STAFF EXODUS BY REGIONS, MINISTRY HEAD OFFICE AND LEVELS

DEPARTMENT	EXECUTIVE		MIDDLE MANAGEMENT		SUPERVISORY		CLERICAL		TOTAL	
	NEW POSITIONS	EXODUS GAP	NEW POSITIONS	EXODUS GAP	NEW POSITIONS	EXODUS GAP	NEW POSITIONS	EXODUS GAP	NEW POSITIONS	EXODUS GAP
REGION X	21	1	376	11	793	36	1749	64	2939	112
REGION Y	20	4	274	110	623	445	1533	484	2451	1042
REGION Z	7	3	76	63	232	224	485	250	801	540
REGION SUBTOTAL	48	8	726	184	1649	705	3767	797	6190	1693
MINISTRY HEAD OFFICE	24	4	169	43	276	165	423	166	892	378
TOTAL	72	12	895	226	1925	870	4190	964	7082	2072

TABLE 6.10n: IMPACT OF MIXED SCENARIO ON STAFF EXODUS BY REGIONS, MINISTRY HEAD OFFICE AND LEVELS

DEPARTMENT	EXECUTIVE		MIDDLE MANAGEMENT		SUPERVISORY		CLERICAL		TOTAL	
	NEW POSITIONS	EXODUS GAP	NEW POSITIONS	EXODUS GAP	NEW POSITIONS	EXODUS GAP	NEW POSITIONS	EXODUS GAP	NEW POSITIONS	EXODUS GAP
REGION X	5	1	96	11	207	36	451	64	759	112
REGION Y	14	5	294	217	315	283	839	301	1462	806
REGION Z	7	4	184	179	131	141	277	156	598	480
REGION SUBTOTAL	26	10	574	408	653	460	1567	520	2820	1398
MINISTRY HEAD OFFICE	26	6	217	90	207	100	360	101	810	297
TOTAL	51	16	791	498	860	560	1927	621	3630	1695

TABLE 6.10o: IMPACT OF PESSIMISTIC SCENARIO ON STAFF EXODUS BY REGIONS, MINISTRY HEAD OFFICE AND LEVELS

DEPARTMENT	EXECUTIVE		MIDDLE MANAGEMENT		SUPERVISORY		CLERICAL		TOTAL	
	NEW POSITIONS	EXODUS GAP	NEW POSITIONS	EXODUS GAP	NEW POSITIONS	EXODUS GAP	NEW POSITIONS	EXODUS GAP	NEW POSITIONS	EXODUS GAP
REGION X	5	1	96	11	207	36	451	64	759	112
REGION Y	10	6	262	233	278	283	509	301	1059	822
REGION Z	6	6	188	187	137	141	194	156	525	489
REGION SUBTOTAL	21	13	546	431	621	460	1154	520	2343	1423
MINISTRY HEAD OFFICE	27	7	224	97	207	100	360	101	818	304
TOTAL	48	20	770	527	828	560	1514	621	3161	1728

TABLE 6.11a: TRAINING IMPACT ASSESSMENT BY LEVELS AND FUNCTIONAL AREAS IN REGION TYPE X (H,M,Ls)				
FUNCTIONAL AREAS	EXECUTIVE	MIDDLE	SUPERVISORY	CLERICAL
SYSTEM GAP				
Policy Analysis	H	L	-	-
MIS	H	M	L	L
M/E	H	M	L	L
Public Communication	H	M	L	L
Planning/Budgeting Link	H	M	M	L
Organizational Development	H	M	M	M
SERVICE DELIVERY				
ABE	-	_	-	-
Counseling	-	-	-	-
Mgmt Spec Services	M	H	L	-
OTHER				
Curriculcum R & D	L	H	M	-
Project Cycle Mgmt	H	H	L	-
Basic Mgmt	H	H	H	M
Performance Appraisal	M	M	H	M
Procurement	M	L	L	M
Teacher Development	L	M	H	-
Mgmt S I Functions	L	M	H	-

TABLE 6.11b: TRAINING IMPACT ASSESSMENT BY LEVELS AND FUNCTIONAL AREAS IN REGION TYPE Y (H,M,Ls)				
FUNCTIONAL AREAS	EXECUTIVE	MIDDLE	SUPERVISORY	CLERICAL
SYSTEM GAP				
Policy Analysis	H	L	L	-
MIS	H	M	L	L
M/E	H	M	L	L
Public Communication	H	M	L	L
Planning/Budgeting Link	H	M	M	L
Organizational Development	H	M	M	M
SERVICE DELIVERY				
ABE	-	-	-	-
Counseling	-	-	-	-
Mgmt Spec Services	L	M	L	-
OTHER				
Curriculcum R & D	L	M	L	-
Project Cycle Mgmt	H	M	L	-
Basic Mgmt	L	L	L	L
Performance Appraisal	L	L	M	L
Procurement	-	L	-	L
Teacher Development	L	M	H	-
Mgmt S I Functions	-	M	H	-

TABLE 6.11c: TRAINING IMPACT ASSESSMENT BY LEVELS AND FUNCTIONAL AREAS IN REGION TYPE Z (H,M,Ls)				
FUNCTIONAL AREAS	EXECUTIVE	MIDDLE	SUPERVISORY	CLERICAL
SYSTEM GAP				
Policy Analysis	H	L	_	-
MIS	H	M	L	L
M/E	H	M	L	L
Public Communication	H	M	L	L
Planning/Budgeting Link	H	M	M	L
Organizational Development	H	M	M	M
SERVICE DELIVERY				
ABE	-	-	-	-
Counseling	-	-	-	-
Mgmt Spec Services	L	L	L	-
OTHER				
Curriculcum R & D	L	M	L	-
Project Cycle Mgmt	_	L	-	-
Basic Mgmt	_	L	L	L
Performance Appraisal	L	L	L	L
Procurement	-	-	-	L
Teacher Development	L	M	H	-
Mgmt S I Functions	_	M	H	-

TABLE 6.11d: TRAINING IMPACT ASSESSMENT BY LEVELS AND FUNCTIONAL AREAS IN MINISTRY HEAD OFFICE (H,M,Ls)				
FUNCTIONAL AREAS	EXECUTIVE	MIDDLE	SUPERVISORY	CLERICAL
SYSTEM GAP				
Policy Analysis	H	H	L	-
MIS	H	H	H	L
M/E	H	H	H	L
Public Communication	H	M	L	-
Planning/Budgeting Link	H	M	L	-
Organizational Development	H	H	M	M
SERVICE DELIVERY				
ABE	-	-	-	-
Counseling	-	-	-	-
Mgmt Spec Services	L	L	L	-
OTHER				
Curriculcum R & D	L	H	M	-
Project Cycle Mgmt	L	H	L	-
Basic Mgmt	L	-	-	L
Performance Appraisal	L	L	L	L
Procurement	-	-	-	-
Teacher Development	L	L	L	-
Mgmt S I Functions	L	L	L	-

TABLE 6.12a: COMPREHENSIVE MODEL: TRAINING NEEDS BY LEVEL AND FUNCTION IN REGION TYPE X

FUNCTIONAL AREAS	EXECUTIVE			MIDDLE			SUPERVISORY			CLERICAL			TOTAL
	IAF	ASN	TUN	IAF	ASN	TUN	IAF	ASN	TUN	IAF	ASN	TUN	TUN
SYSTEM GAP													
Policy Analysis	0.100	39.8	4.0	0.030	588.0	17.6	0.000	1482.3	0.0	0.000	2961.3	0.0	22
MIS	0.100	39.8	4.0	0.070	588.0	41.2	0.030	1482.3	44.5	0.030	2961.3	88.8	178
M/E	0.100	39.8	4.0	0.070	588.0	41.2	0.030	1482.3	44.5	0.030	2961.3	88.8	178
Public Communication	0.100	39.8	4.0	0.070	588.0	41.2	0.030	1482.3	44.5	0.030	2961.3	88.8	178
Planning/Budgeting Link	0.100	39.8	4.0	0.070	588.0	41.2	0.070	1482.3	103.8	0.030	2961.3	88.8	238
Organizational Development	0.100	39.8	4.0	0.070	588.0	41.2	0.070	1482.3	103.8	0.070	2961.3	207.3	356
SERVICE DELIVERY													
ABE	0.000	39.8	0.0	0.000	588.0	0.0	0.000	1482.3	0.0	0.000	2961.3	0.0	0
Counseling	0.000	39.8	0.0	0.000	588.0	0.0	0.000	1482.3	0.0	0.000	2961.3	0.0	0
Mgmt Spec Services	0.035	39.8	1.4	0.050	588.0	29.4	0.020	1482.3	29.6	0.000	2961.3	0.0	60
OTHER													
Curriculcum R & D	0.020	39.8	0.8	0.050	588.0	29.4	0.035	1482.3	51.9	0.000	2961.3	0.0	82
Project Cycle Mgmt	0.050	39.8	2.0	0.050	588.0	29.4	0.020	1482.3	29.6	0.000	2961.3	0.0	61
Basic Mgmt	0.050	39.8	2.0	0.050	588.0	29.4	0.050	1482.3	74.1	0.035	2961.3	103.6	209
Performance Appraisal	0.035	39.8	1.4	0.035	588.0	20.6	0.050	1482.3	74.1	0.035	2961.3	103.6	200
Procurement	0.035	39.8	1.4	0.020	588.0	11.8	0.020	1482.3	29.6	0.035	2961.3	103.6	146
Teacher Development	0.020	39.8	0.8	0.035	588.0	20.6	0.050	1482.3	74.1	0.000	2961.3	0.0	95
Mgmt S I Functions	0.020	39.8	0.8	0.035	588.0	20.6	0.050	1482.3	74.1	0.000	2961.3	0.0	95
TOTALS:			34.4			414.5			778.2			873.6	2101

NOTE: ASN: Adjusted Staffing Need for 1993
IAF: Impact Assessment Factor
TUN: Training Units Needed

TABLE 6.12b: COMPREHENSIVE MODEL: TRAINING NEEDS BY LEVEL AND FUNCTION IN REGION TYPE Y

FUNCTIONAL AREAS	EXECUTIVE			MIDDLE			SUPERVISORY			CLERICAL			TOTAL
	IAF	ASN	TUN	IAF	ASN	TUN	IAF	ASN	TUN	IAF	ASN	TUN	TUN
SYSTEM GAP													
Policy Analysis	0.100	36.1	3.6	0.030	823.9	24.7	0.000	2534.9	0.0	0.000	3395.3	0.0	28
MIS	0.100	36.1	3.6	0.070	823.9	57.7	0.030	2534.9	76.0	0.030	3395.3	101.9	239
M/E	0.100	36.1	3.6	0.070	823.9	57.7	0.030	2534.9	76.0	0.030	3395.3	101.9	239
Public Communication	0.100	36.1	3.6	0.070	823.9	57.7	0.030	2534.9	76.0	0.030	3395.3	101.9	239
Planning/Budgeting Link	0.100	36.1	3.6	0.070	823.9	57.7	0.070	2534.9	177.4	0.030	3395.3	101.9	341
Organizational Development	0.100	36.1	3.6	0.070	823.9	57.7	0.070	2534.9	177.4	0.070	3395.3	237.7	476
SERVICE DELIVERY													
ABE	0.000	36.1	0.0	0.000	823.9	0.0	0.000	2534.9	0.0	0.000	3395.3	0.0	0
Counseling	0.000	36.1	0.0	0.000	823.9	0.0	0.000	2534.9	0.0	0.000	3395.3	0.0	0
Mgmt Spec Services	0.020	36.1	0.7	0.035	823.9	28.8	0.020	2534.9	50.7	0.000	3395.3	0.0	80
OTHER													
Curriculcum R & D	0.020	36.1	0.7	0.035	823.9	28.8	0.020	2534.9	50.7	0.000	3395.3	0.0	80
Project Cycle Mgmt	0.050	36.1	1.8	0.035	823.9	28.8	0.020	2534.9	50.7	0.000	3395.3	0.0	81
Basic Mgmt	0.020	36.1	0.7	0.020	823.9	16.5	0.020	2534.9	50.7	0.020	3395.3	67.9	136
Performance Appraisal	0.020	36.1	0.7	0.020	823.9	16.5	0.035	2534.9	88.7	0.020	3395.3	67.9	174
Procurement	0.000	36.1	0.0	0.020	823.9	16.5	0.000	2534.9	0.0	0.020	3395.3	67.9	84
Teacher Development	0.020	36.1	0.7	0.035	823.9	28.8	0.050	2534.9	126.7	0.000	3395.3	0.0	156
Mgmt S I Functions	0.000	36.1	0.0	0.035	823.9	28.8	0.050	2534.9	126.7	0.000	3395.3	0.0	156
TOTALS:			27.1			506.7			1128.0			848.8	2511

NOTE: ASN: Adjusted Staffing Need for 1993
IAF: Impact Assessment Factor
TUN: Training Units Needed

TABLE 6.12c: COMPREHENSIVE MODEL: TRAINING NEEDS BY LEVEL AND FUNCTION IN REGION TYPE Z

FUNCTIONAL AREAS	EXECUTIVE			MIDDLE			SUPERVISORY			CLERICAL			TOTAL
	IAF	ASN	TUN	IAF	ASN	TUN	IAF	ASN	TUN	IAF	ASN	TUN	TUN
SYSTEM GAP													
Policy Analysis	0.100	14.9	1.5	0.030	442.4	13.3	0.000	1146.6	0.0	0.000	1460.9	0.0	15
MIS	0.100	14.9	1.5	0.070	442.4	31.0	0.030	1146.6	34.4	0.030	1460.9	43.8	111
M/E	0.100	14.9	1.5	0.070	442.4	31.0	0.030	1146.6	34.4	0.030	1460.9	43.8	111
Public Communication	0.100	14.9	1.5	0.070	442.4	31.0	0.030	1146.6	34.4	0.030	1460.9	43.8	111
Planning/Budgeting Link	0.100	14.9	1.5	0.070	442.4	31.0	0.070	1146.6	80.3	0.030	1460.9	43.8	157
Organizational Development	0.100	14.9	1.5	0.070	442.4	31.0	0.070	1146.6	80.3	0.070	1460.9	102.3	215
SERVICE DELIVERY													
ABE	0.000	14.9	0.0	0.000	442.4	0.0	0.000	1146.6	0.0	0.000	1460.9	0.0	0
Counseling	0.000	14.9	0.0	0.000	442.4	0.0	0.000	1146.6	0.0	0.000	1460.9	0.0	0
Mgmt Spec Services	0.020	14.9	0.3	0.020	442.4	8.8	0.020	1146.6	22.9	0.000	1460.9	0.0	32
OTHER													
Curriculcum R & D	0.020	14.9	0.3	0.035	442.4	15.5	0.020	1146.6	22.9	0.000	1460.9	0.0	39
Project Cycle Mgmt	0.000	14.9	0.0	0.020	442.4	8.8	0.000	1146.6	0.0	0.000	1460.9	0.0	9
Basic Mgmt	0.000	14.9	0.0	0.020	442.4	8.8	0.020	1146.6	22.9	0.020	1460.9	29.2	61
Performance Appraisal	0.020	14.9	0.3	0.020	442.4	8.8	0.020	1146.6	22.9	0.020	1460.9	29.2	61
Procurement	0.000	14.9	0.0	0.000	442.4	0.0	0.000	1146.6	0.0	0.020	1460.9	29.2	29
Teacher Development	0.020	14.9	0.3	0.035	442.4	15.5	0.050	1146.6	57.3	0.000	1460.9	0.0	73
Mgmt S I Functions	0.000	14.9	0.0	0.035	442.4	15.5	0.050	1146.6	57.3	0.000	1460.9	0.0	73
TOTALS:			10.1			250.0			470.1			365.2	1095

NOTE: ASN: Adjusted Staffing Need for 1993
IAF: Impact Assessment Factor
TUN: Training Units Needed

TABLE 6.12d: COMPREHENSIVE MODEL: TRAINING NEEDS BY LEVEL AND FUNCTION IN MINISTRY HEAD OFFICE

FUNCTIONAL AREAS	EXECUTIVE			MIDDLE			SUPERVISORY			CLERICAL			TOTAL
	IAF	ASN	TUN	IAF	ASN	TUN	IAF	ASN	TUN	IAF	ASN	TUN	TUN
SYSTEM GAP													
Policy Analysis	0.100	39.2	3.92	0.100	377.7	37.77	0.030	815.1	24.5	0.000	986.9	0.0	66
MIS	0.100	39.2	3.92	0.100	377.7	37.77	0.100	815.1	81.5	0.030	986.9	29.6	153
M/E	0.100	39.2	3.92	0.100	377.7	37.77	0.100	815.1	81.5	0.030	986.9	29.6	153
Public Communication	0.100	39.2	3.92	0.070	377.7	26.44	0.030	815.1	24.5	0.000	986.9	0.0	55
Planning/Budgeting Link	0.100	39.2	3.92	0.070	377.7	26.44	0.030	815.1	24.5	0.000	986.9	0.0	55
Organizational Development	0.100	39.2	3.92	0.100	377.7	37.77	0.070	815.1	57.1	0.070	986.9	69.1	168
SERVICE DELIVERY													
ABE	0.000	39.2	0.00	0.000	377.7	0.00	0.000	815.1	0.0	0.000	986.9	0.0	0
Counseling	0.000	39.2	0.00	0.000	377.7	0.00	0.000	815.1	0.0	0.000	986.9	0.0	0
Mgmt Spec Services	0.020	39.2	0.78	0.020	377.7	7.55	0.020	815.1	16.3	0.000	986.9	0.0	25
OTHER													
Curriculcum R & D	0.020	39.2	0.78	0.050	377.7	18.89	0.030	815.1	24.5	0.000	986.9	0.0	44
Project Cycle Mgmt	0.020	39.2	0.78	0.050	377.7	18.89	0.020	815.1	16.3	0.000	986.9	0.0	36
Basic Mgmt	0.020	39.2	0.78	0.000	377.7	0.00	0.000	815.1	0.0	0.020	986.9	19.7	21
Performance Appraisal	0.020	39.2	0.78	0.020	377.7	7.55	0.020	815.1	16.3	0.020	986.9	19.7	44
Procurement	0.000	39.2	0.00	0.000	377.7	0.00	0.000	815.1	0.0	0.000	986.9	0.0	0
Teacher Development	0.020	39.2	0.78	0.020	377.7	7.55	0.020	815.1	16.3	0.000	986.9	0.0	25
Mgmt S I Functions	0.020	39.2	0.78	0.020	377.7	7.55	0.020	815.1	16.3	0.000	986.9	0.0	25
TOTALS:			29.0			271.9			399.4			167.8	868

NOTE: ASN: Adjusted Staffing Need for 1993
IAF: Impact Assessment Factor
TUN: Training Units Needed

TABLE 6.12e: SUMMARY OF TRAINING NEEDS UNDER COMPREHENSIVE MODEL					
FUNCTIONAL AREAS	EXECUTIVE	MIDDLE	SUPERVISORY	CLERICAL	TOTAL
	TUN	TUN	TUN	TUN	TUN
SYSTEM GAP					
Policy Analysis	13	93	24	0	131
MIS	13	168	236	264	681
M/E	13	168	236	264	681
Public Communication	13	156	179	235	583
Planning/Budgeting Link	13	156	386	235	790
Organizational Development	13	168	419	616	1215
SERVICE DELIVERY					
ABE	0	0	0	0	0
Counseling	0	0	0	0	0
Mgmt Spec Services	3	75	120	0	197
OTHER					
Curriculcum R & D	3	93	150	0	245
Project Cycle Mgmt	5	86	97	0	187
Basic Mgmt	3	55	148	221	426
Performance Appraisal	3	53	202	221	479
Procurement	1	28	30	201	260
Teacher Development	3	72	274	0	350
Mgmt S I Functions	2	72	274	0	349
TOTALS:	101	1443	2776	2255	6575

TABLE 6.13a: MIXED MODEL: TRAINING NEEDS BY LEVEL AND FUNCTION IN REGION TYPE X

FUNCTIONAL AREAS	EXECUTIVE			MIDDLE			SUPERVISORY			CLERICAL			TOTAL
	IAF	ASN	TUN	IAF	ASN	TUN	IAF	ASN	TUN	IAF	ASN	TUN	TUN
SYSTEM GAP													
Policy Analysis	0.100	24.5	2	0.030	308.0	9	0.000	895.6	0	0.000	1663.0	0	12
MIS	0.100	24.5	2	0.070	308.0	22	0.030	895.6	27	0.030	1663.0	50	101
M/E	0.100	24.5	2	0.070	308.0	22	0.030	895.6	27	0.030	1663.0	50	101
Public Communication	0.100	24.5	2	0.070	308.0	22	0.030	895.6	27	0.030	1663.0	50	101
Planning/Budgeting Link	0.100	24.5	2	0.070	308.0	22	0.070	895.6	63	0.030	1663.0	50	137
Organizational Development	0.100	24.5	2	0.070	308.0	22	0.070	895.6	63	0.070	1663.0	116	203
SERVICE DELIVERY													
ABE	0.000	24.5	0	0.000	308.0	0	0.000	895.6	0	0.000	1663.0	0	0
Counseling	0.000	24.5	0	0.000	308.0	0	0.000	895.6	0	0.000	1663.0	0	0
Mgmt Spec Services	0.035	24.5	1	0.050	308.0	15	0.020	895.6	18	0.000	1663.0	0	34
OTHER													
Curriculcum R & D	0.020	24.5	0	0.050	308.0	15	0.035	895.6	31	0.000	1663.0	0	47
Project Cycle Mgmt	0.050	24.5	1	0.050	308.0	15	0.020	895.6	18	0.000	1663.0	0	35
Basic Mgmt	0.050	24.5	1	0.050	308.0	15	0.050	895.6	45	0.035	1663.0	58	120
Performance Appraisal	0.035	24.5	1	0.035	308.0	11	0.050	895.6	45	0.035	1663.0	58	115
Procurement	0.035	24.5	1	0.020	308.0	6	0.020	895.6	18	0.035	1663.0	58	83
Teacher Development	0.020	24.5	0	0.035	308.0	11	0.050	895.6	45	0.000	1663.0	0	56
Mgmt S I Functions	0.020	24.5	0	0.035	308.0	11	0.050	895.6	45	0.000	1663.0	0	56
TOTALS:			21			217			470			491	1199

NOTE: ASN: Adjusted Staffing Need for 1993
IAF: Impact Assessment Factor
TUN: Training Units Needed

TABLE 6.13b: MIXED MODEL: TRAINING NEEDS BY LEVEL AND FUNCTION IN REGION TYPE Y

FUNCTIONAL AREAS	EXECUTIVE			MIDDLE			SUPERVISORY			CLERICAL			TOTAL
	IAF	ASN	TUN	IAF	ASN	TUN	IAF	ASN	TUN	IAF	ASN	TUN	TUN
SYSTEM GAP													
Policy Analysis	0.100	28.6	3	0.030	736.6	22	0.000	2424.4	0	0.000	2889.4	0	25
MIS	0.100	28.6	3	0.070	736.6	52	0.030	2424.4	73	0.030	2889.4	87	214
M/E	0.100	28.6	3	0.070	736.6	52	0.030	2424.4	73	0.030	2889.4	87	214
Public Communication	0.100	28.6	3	0.070	736.6	52	0.030	2424.4	73	0.030	2889.4	87	214
Planning/Budgeting Link	0.100	28.6	3	0.070	736.6	52	0.070	2424.4	170	0.030	2889.4	87	311
Organizational Development	0.100	28.6	3	0.070	736.6	52	0.070	2424.4	170	0.070	2889.4	202	426
SERVICE DELIVERY													
ABE	0.000	28.6	0	0.000	736.6	0	0.000	2424.4	0	0.000	2889.4	0	0
Counseling	0.000	28.6	0	0.000	736.6	0	0.000	2424.4	0	0.000	2889.4	0	0
Mgmt Spec Services	0.020	28.6	1	0.035	736.6	26	0.020	2424.4	48	0.000	2889.4	0	75
OTHER													
Curriculcum R & D	0.020	28.6	1	0.035	736.6	26	0.020	2424.4	48	0.000	2889.4	0	75
Project Cycle Mgmt	0.050	28.6	1	0.035	736.6	26	0.020	2424.4	48	0.000	2889.4	0	76
Basic Mgmt	0.020	28.6	1	0.020	736.6	15	0.020	2424.4	48	0.020	2889.4	58	122
Performance Appraisal	0.020	28.6	1	0.020	736.6	15	0.035	2424.4	85	0.020	2889.4	58	158
Procurement	0.000	28.6	0	0.020	736.6	15	0.000	2424.4	0	0.020	2889.4	58	73
Teacher Development	0.020	28.6	1	0.035	736.6	26	0.050	2424.4	121	0.000	2889.4	0	148
Mgmt S I Functions	0.000	28.6	0	0.035	736.6	26	0.050	2424.4	121	0.000	2889.4	0	147
TOTALS:			21			453			1079			722	2276

NOTE: ASN: Adjusted Staffing Need for 1993
IAF: Impact Assessment Factor
TUN: Training Units Needed

TABLE 6.13c: MIXED MODEL: TRAINING NEEDS BY LEVEL AND FUNCTION IN REGION TYPE Z

FUNCTIONAL AREAS	EXECUTIVE			MIDDLE			SUPERVISORY			CLERICAL			TOTAL
	IAF	ASN	TUN	IAF	ASN	TUN	IAF	ASN	TUN	IAF	ASN	TUN	TUN
SYSTEM GAP													
Policy Analysis	0.100	13.1	1	0.030	433.1	13	0.000	1137.5	0	0.000	1347.4	40	55
MIS	0.100	13.1	1	0.070	433.1	30	0.030	1137.5	34	0.030	1347.4	40	106
M/E	0.100	13.1	1	0.070	433.1	30	0.030	1137.5	34	0.030	1347.4	40	106
Public Communication	0.100	13.1	1	0.070	433.1	30	0.030	1137.5	34	0.030	1347.4	94	160
Planning/Budgeting Link	0.100	13.1	1	0.070	433.1	30	0.070	1137.5	80	0.030	1347.4	0	111
Organizational Development	0.100	13.1	1	0.070	433.1	30	0.070	1137.5	80	0.070	1347.4	0	111
SERVICE DELIVERY													
ABE	0.000	13.1	0	0.000	433.1	0	0.000	1137.5	0	0.000	1347.4	0	0
Counseling	0.000	13.1	0	0.000	433.1	0	0.000	1137.5	0	0.000	1347.4	0	0
Mgmt Spec Services	0.020	13.1	0	0.020	433.1	9	0.020	1137.5	23	0.000	1347.4	0	32
OTHER													
Curriculcum R & D	0.020	13.1	0	0.035	433.1	15	0.020	1137.5	23	0.000	1347.4	47	85
Project Cycle Mgmt	0.000	13.1	0	0.020	433.1	9	0.000	1137.5	0	0.000	1347.4	27	36
Basic Mgmt	0.000	13.1	0	0.020	433.1	9	0.020	1137.5	23	0.035	1347.4	47	79
Performance Appraisal	0.020	13.1	0	0.020	433.1	9	0.020	1137.5	23	0.020	1347.4	0	32
Procurement	0.000	13.1	0	0.000	433.1	0	0.000	1137.5	0	0.035	1347.4	0	0
Teacher Development	0.020	13.1	0	0.035	433.1	15	0.050	1137.5	57	0.000	1347.4	0	72
Mgmt S I Functions	0.000	13.1	0	0.035	433.1	15	0.050	1137.5	57	0.000	1347.4	0	72
TOTALS:			9			245			466			337	1057

NOTE: ASN: Adjusted Staffing Need for 1993
IAF: Impact Assessment Factor
TUN: Training Units Needed

TABLE 6.13d: MIXED MODEL: TRAINING NEEDS BY LEVEL AND FUNCTION IN MINISTRY HEAD OFFICE

FUNCTIONAL AREAS	EXECUTIVE			MIDDLE			SUPERVISORY			CLERICAL			TOTAL
	IAF	ASN	TUN	IAF	ASN	TUN	IAF	ASN	TUN	IAF	ASN	TUN	TUN
SYSTEM GAP													
Policy Analysis	0.100	39	4	0.100	378	38	0.030	815	24	0.000	987	0	66
MIS	0.100	39	4	0.100	378	38	0.100	815	82	0.030	987	30	153
M/E	0.100	39	4	0.100	378	38	0.100	815	82	0.030	987	30	153
Public Communication	0.100	39	4	0.070	378	26	0.030	815	24	0.000	987	0	55
Planning/Budgeting Link	0.100	39	4	0.070	378	26	0.030	815	24	0.000	987	0	55
Organizational Development	0.100	39	4	0.100	378	38	0.070	815	57	0.070	987	69	168
SERVICE DELIVERY													
ABE	0.000	39	0	0.000	378	0	0.000	815	0	0.000	987	0	0
Counseling	0.000	39	0	0.000	378	0	0.000	815	0	0.000	987	0	0
Mgmt Spec Services	0.020	39	1	0.020	378	8	0.020	815	16	0.000	987	0	25
OTHER													
Curriculcum R & D	0.020	39	1	0.050	378	19	0.030	815	24	0.000	987	0	44
Project Cycle Mgmt	0.020	39	1	0.050	378	19	0.020	815	16	0.000	987	0	36
Basic Mgmt	0.020	39	1	0.000	378	0	0.000	815	0	0.020	987	20	21
Performance Appraisal	0.020	39	1	0.020	378	8	0.020	815	16	0.020	987	20	44
Procurement	0.000	39	0	0.000	378	0	0.000	815	0	0.000	987	0	0
Teacher Development	0.020	39	1	0.020	378	8	0.020	815	16	0.000	987	0	25
Mgmt S I Functions	0.020	39	1	0.020	378	8	0.020	815	16	0.000	987	0	25
TOTALS:			29			272			399			168	868

NOTE: ASN: Adjusted Staffing Need for 1993
IAF: Impact Assessment Factor
TUN: Training Units Needed

TABLE 6.13e: SUMMARY OF TRAINING NEEDS UNDER MIXED MODEL					
FUNCTIONAL AREAS	EXECUTIVE	MIDDLE	SUPERVISORY	CLERICAL	TOTAL
	TUN	TUN	TUN	TUN	TUN
SYSTEM GAP					
Policy Analysis	11	82	24	40	158
MIS	11	141	215	207	574
M/E	11	141	215	207	574
Public Communication	11	130	158	231	529
Planning/Budgeting Link	11	130	336	137	613
Organizational Development	11	141	369	388	909
SERVICE DELIVERY					
ABE	0	0	0	0	0
Counseling	0	0	0	0	0
Mgmt Spec Services	2	57	105	0	165
OTHER					
Curriculcum R & D	2	75	127	47	252
Project Cycle Mgmt	3	69	83	27	182
Basic Mgmt	3	39	116	183	340
Performance Appraisal	2	42	169	136	349
Procurement	1	21	18	116	156
Teacher Development	2	59	239	0	301
Mgmt S I Functions	1	59	239	0	300
TOTALS:	81	1187	2415	1718	5400

TABLE 6.14a: SELECTIVE MODEL: TRAINING NEEDS BY LEVEL IN REGION TYPE X													
FUNCTIONAL	EXECUTIVE			MIDDLE			SUPERVISORY			CLERICAL			TOTAL
AREAS	IAF	ASN	TUN	IAF	ASN	TUN	IAF	ASN	TUN	IAF	ASN	TUN	TUN
SYSTEM GAP													
Policy Analysis	0.100	24.5	2	0.030	308.0	9	0.000	895.6	0	0.000	1663.0	0	12
MIS	0.100	24.5	2	0.070	308.0	22	0.030	895.6	27	0.030	1663.0	50	101
M/E	0.100	24.5	2	0.070	308.0	22	0.030	895.6	27	0.030	1663.0	50	101
Public Communication	0.100	24.5	2	0.070	308.0	22	0.030	895.6	27	0.030	1663.0	50	101
Planning/Budgeting Link	0.100	24.5	2	0.070	308.0	22	0.070	895.6	63	0.030	1663.0	50	137
Organizational Development	0.100	24.5	2	0.070	308.0	22	0.070	895.6	63	0.070	1663.0	116	203
SERVICE DELIVERY													
ABE	0.000	24.5	0	0.000	308.0	0	0.000	895.6	0	0.000	1663.0	0	0
Counseling	0.000	24.5	0	0.000	308.0	0	0.000	895.6	0	0.000	1663.0	0	0
Mgmt Spec Services	0.035	24.5	1	0.050	308.0	15	0.020	895.6	18	0.000	1663.0	0	34
OTHER													
Curriculcum R & D	0.020	24.5	0	0.050	308.0	15	0.035	895.6	31	0.000	456.9	0	47
Project Cycle Mgmt	0.050	24.5	1	0.050	308.0	15	0.020	895.6	18	0.000	456.9	0	35
Basic Mgmt	0.050	24.5	1	0.050	308.0	15	0.050	895.6	45	0.035	456.9	16	77
Performance Appraisal	0.035	24.5	1	0.035	308.0	11	0.050	895.6	45	0.035	456.9	16	72
Procurement	0.035	24.5	1	0.020	308.0	6	0.020	895.6	18	0.035	456.9	16	41
Teacher Development	0.020	24.5	0	0.035	308.0	11	0.050	895.6	45	0.000	456.9	0	56
Mgmt S I Functions	0.020	24.5	0	0.035	308.0	11	0.050	895.6	45	0.000	456.9	0	56
TOTALS:			21			217			470			364	1072

NOTE: ASN: Adjusted Staffing Need for 1993
IAF: Impact Assessment Factor
TUN: Training Units Needed

TABLE 6.14b: SELECTIVE MODEL: TRAINING NEEDS BY LEVEL IN REGION TYPE Y

FUNCTIONAL AREAS	EXECUTIVE			MIDDLE			SUPERVISORY			CLERICAL			TOTAL
	IAF	ASN	TUN	IAF	ASN	TUN	IAF	ASN	TUN	IAF	ASN	TUN	TUN
SYSTEM GAP													
Policy Analysis	0.100	23.5	2	0.030	689.3	21	0.000	2423.8	0	0.000	2559.6	0	23
MIS	0.100	23.5	2	0.070	689.3	48	0.030	2423.8	73	0.030	2559.6	77	200
M/E	0.100	23.5	2	0.070	689.3	48	0.030	2423.8	73	0.030	2559.6	77	200
Public Communication	0.100	23.5	2	0.070	689.3	48	0.030	2423.8	73	0.030	2559.6	77	200
Planning/Budgeting Link	0.100	23.5	2	0.070	689.3	48	0.070	2423.8	170	0.030	2559.6	77	297
Organizational Development	0.100	23.5	2	0.070	689.3	48	0.070	2423.8	170	0.070	2559.6	179	399
SERVICE DELIVERY													
ABE	0.000	23.5	0	0.000	689.3	0	0.000	2423.8	0	0.000	2559.6	0	0
Counseling	0.000	23.5	0	0.000	689.3	0	0.000	2423.8	0	0.000	2559.6	0	0
Mgmt Spec Services	0.020	23.5	0	0.035	689.3	24	0.020	2423.8	48	0.000	2559.6	0	73
OTHER													
Curriculcum R & D	0.020	23.5	0	0.035	689.3	24	0.020	2423.8	48	0.000	2559.6	0	73
Project Cycle Mgmt	0.050	23.5	1	0.035	689.3	24	0.020	2423.8	48	0.000	2559.6	0	74
Basic Mgmt	0.020	23.5	0	0.020	689.3	14	0.020	2423.8	48	0.020	2559.6	51	114
Performance Appraisal	0.020	23.5	0	0.020	689.3	14	0.035	2423.8	85	0.020	2559.6	51	150
Procurement	0.000	23.5	0	0.020	689.3	14	0.000	2423.8	0	0.020	2559.6	51	65
Teacher Development	0.020	23.5	0	0.035	689.3	24	0.050	2423.8	121	0.000	2559.6	0	146
Mgmt S I Functions	0.000	23.5	0	0.035	689.3	24	0.050	2423.8	121	0.000	2559.6	0	145
TOTALS:			18			424			1079			640	2160

NOTE: ASN: Adjusted Staffing Need for 1993
IAF: Impact Assessment Factor
TUN: Training Units Needed

TABLE 6.14c: SELECTIVE MODEL: TRAINING NEEDS BY LEVEL IN REGION TYPE Z

FUNCTIONAL	EXECUTIVE			MIDDLE			SUPERVISORY			CLERICAL			TOTAL
AREAS	IAF	ASN	TUN	IAF	ASN	TUN	IAF	ASN	TUN	IAF	ASN	TUN	TUN
SYSTEM GAP													
Policy Analysis	0.100	11.7	1	0.030	429.9	13	0.000	1143.0	0	0.000	1264.7	0	14
MIS	0.100	11.7	1	0.070	429.9	30	0.030	1143.0	34	0.030	1264.7	38	103
M/E	0.100	11.7	1	0.070	429.9	30	0.030	1143.0	34	0.030	1264.7	38	103
Public Communication	0.100	11.7	1	0.070	429.9	30	0.030	1143.0	34	0.030	1264.7	38	103
Planning/Budgeting Link	0.100	11.7	1	0.070	429.9	30	0.070	1143.0	80	0.030	1264.7	38	149
Organizational Development	0.100	11.7	1	0.070	429.9	30	0.070	1143.0	80	0.070	1264.7	89	200
SERVICE DELIVERY													
ABE	0.000	11.7	0	0.000	429.9	0	0.000	1143.0	0	0.000	1264.7	0	0
Counseling	0.000	11.7	0	0.000	429.9	0	0.000	1143.0	0	0.000	1264.7	0	0
Mgmt Spec Services	0.020	11.7	0	0.020	429.9	9	0.020	1143.0	23	0.000	1264.7	0	32
OTHER													
Curriculcum R & D	0.020	11.7	0	0.035	429.9	15	0.020	1143.0	23	0.000	1264.7	0	38
Project Cycle Mgmt	0.000	11.7	0	0.020	429.9	9	0.000	1143.0	0	0.000	1264.7	0	9
Basic Mgmt	0.000	11.7	0	0.020	429.9	9	0.020	1143.0	23	0.020	1264.7	25	57
Performance Appraisal	0.020	11.7	0	0.020	429.9	9	0.020	1143.0	23	0.020	1264.7	25	57
Procurement	0.000	11.7	0	0.000	429.9	0	0.000	1143.0	0	0.020	1264.7	25	25
Teacher Development	0.020	11.7	0	0.035	429.9	15	0.050	1143.0	57	0.000	1264.7	0	72
Mgmt S I Functions	0.000	11.7	0	0.035	429.9	15	0.050	1143.0	57	0.000	1264.7	0	72
TOTALS:			8			243			469			316	1036

NOTE: ASN: Adjusted Staffing Need for 1993
IAF: Impact Assessment Factor
TUN: Training Units Needed

TABLE 6.14d: SELECTIVE MODEL: TABLE 6.14d: SELECTIVE MODEL: TRAINING NEEDS BY LEVEL

FUNCTIONAL AREAS	EXECUTIVE			MIDDLE			SUPERVISORY			CLERICAL			TOTAL
	IAF	ASN	TUN	IAF	ASN	TUN	IAF	ASN	TUN	IAF	ASN	TUN	TUN
SYSTEM GAP													
Policy Analysis	0.100	39.2	4	0.100	377.7	38	0.030	815.1	24	0.000	986.9	0	66
MIS	0.100	39.2	4	0.100	377.7	38	0.100	815.1	82	0.030	986.9	30	153
M/E	0.100	39.2	4	0.100	377.7	38	0.100	815.1	82	0.030	986.9	30	153
Public Communication	0.100	39.2	4	0.070	377.7	26	0.030	815.1	24	0.000	986.9	0	55
Planning/Budgeting Link	0.100	39.2	4	0.070	377.7	26	0.030	815.1	24	0.000	986.9	0	55
Organizational Development	0.100	39.2	4	0.100	377.7	38	0.070	815.1	57	0.070	986.9	69	168
SERVICE DELIVERY													
ABE	0.000	39.2	0	0.000	377.7	0	0.000	815.1	0	0.000	986.9	0	0
Counseling	0.000	39.2	0	0.000	377.7	0	0.000	815.1	0	0.000	986.9	0	0
Mgmt Spec Services	0.020	39.2	1	0.020	377.7	8	0.020	815.1	16	0.000	986.9	0	25
OTHER													
Curriculcum R & D	0.020	39.2	1	0.050	377.7	19	0.030	815.1	24	0.000	986.9	0	44
Project Cycle Mgmt	0.020	39.2	1	0.050	377.7	19	0.020	815.1	16	0.000	986.9	0	36
Basic Mgmt	0.020	39.2	1	0.000	377.7	0	0.000	815.1	0	0.020	986.9	20	21
Performance Appraisal	0.020	39.2	1	0.020	377.7	8	0.020	815.1	16	0.020	986.9	20	44
Procurement	0.000	39.2	0	0.000	377.7	0	0.000	815.1	0	0.000	986.9	0	0
Teacher Development	0.020	39.2	1	0.020	377.7	8	0.020	815.1	16	0.000	986.9	0	25
Mgmt S I Functions	0.020	39.2	1	0.020	377.7	8	0.020	815.1	16	0.000	986.9	0	25
TOTALS:			29			272			399			168	868

NOTE: ASN: Adjusted Staffing Need for 1993
IAF: Impact Assessment Factor
TUN: Training Units Needed

TABLE 6.14e: SUMMARY OF TRAINING NEEDS UNDER SELECTIVE MODEL					
FUNCTIONAL AREAS	EXECUTIVE TUN	MIDDLE TUN	SUPERVISORY TUN	CLERICAL TUN	TOTAL TUN
SYSTEM GAP					
Policy Analysis	10	81	24	0	115
MIS	10	138	215	194	557
M/E	10	138	215	194	557
Public Communication	10	126	158	165	459
Planning/Budgeting Link	10	126	337	165	638
Organizational Development	10	138	369	453	970
SERVICE DELIVERY					
ABE	0	0	0	0	0
Counseling	0	0	0	0	0
Mgmt Spec Services	2	56	106	0	164
OTHER					
Curriculcum R & D	2	73	127	0	203
Project Cycle Mgmt	3	67	83	0	153
Basic Mgmt	2	38	116	112	269
Performance Appraisal	2	41	169	112	324
Procurement	1	20	18	92	131
Teacher Development	2	58	239	0	299
Mgmt S I Functions	1	58	239	0	298
TOTALS:	76	1156	2417	1488	5136

TABLE 6.15: CRITICAL MASS TRAINING NEEDS FOR REGIONS AND MINISTRY HEAD OFFICE					
FUNCTIONAL AREAS	EXECUTIVE	MIDDLE	SUPERVISORY	CLERICAL	TOTAL
SYSTEM GAP					
Policy Analysis	10	81	124	0	215
MIS	10	81	124	33	248
M/E	10	81	124	33	248
Public Communication	10	81	124	33	248
Planning/Budgeting Link	10	81	124	33	248
Organizational Development	10	81	124	33	248
SERVICE DELIVERY					
ABE					
Counseling					
Mgmt Spec Services	10	59	42	11	122
OTHER					
Curriculcum R & D	10	59	42	11	122
Project Cycle Mgmt	10	59	42	11	122
Basic Mgmt	10	59	42	11	122
Performance Appraisal	10	59	42	11	122
Procurement	10	59	42	11	122
Teacher Development	10	59	42	11	122
Mgmt S I Functions	10	59	42	11	122
TOTALS:	140	958	1080	253	

TABLE 6.16a: TRAINING FOR SUSTAINABILITY: COMPREHENSIVE MODEL							
FUNCTIONAL AREAS	TUN	TOTAL CRITICAL MASS	SUSTAINABILITY BASE	BUDGET FACTOR	GAP FACTOR	EXODUS FACTOR	ANNUAL TRAINING NEED
SYSTEM GAP							
Policy Analysis	131	215	-84	-7	32	65	91
MIS	681	248	433	35	37	65	137
M/E	681	248	433	35	37	65	137
Public Communication	583	248	335	27	37	65	129
Planning/Budgeting Link	790	248	542	43	37	65	146
Organizational Development	1215	248	967	77	37	65	180
SERVICE DELIVERY							
ABE	0	0	0	0	0	0	0
Counseling	0	0	0	0	0	0	0
Mgmt Spec Services	197	122	75	6	0	0	6
OTHER							
Curriculcum R & D	245	122	123	10	0	33	42
Project Cycle Mgmt	187	122	65	5	0	33	38
Basic Mgmt	426	122	304	24	0	33	57
Performance Appraisal	479	122	357	29	0	33	61
Procurement	260	122	138	11	0	33	44
Teacher Development	350	122	228	18	0	33	51
Mgmt S I Functions	349	122	227	18	0	33	51
TOTALS:	6575	2431	4144				1167

TABLE 6.16b: TRAINING FOR SUSTAINABILITY: MIXED MODEL							
FUNCTIONAL AREAS	TUN	TOTAL CRITICAL MASS	SUSTAINABILITY BASE	BUDGET FACTOR	GAP FACTOR	EXODUS FACTOR	ANNUAL TRAINING NEEDS
SYSTEM GAP							
Policy Analysis	158	215	-57	-3	22	41	60
MIS	574	248	326	16	25	41	82
M/E	574	248	326	16	25	41	82
Public Communication	529	248	281	14	25	41	80
Planning/Budgeting Link	613	248	365	18	25	41	84
Organizational Development	909	248	661	33	25	41	99
SERVICE DELIVERY							
ABE	0	0	0	0	0	0	0
Counseling	0	0	0	0	0	0	0
Mgmt Spec Services	165	122	43	2	0	0	2
OTHER							
Curriculcum R & D	252	122	130	6	0	21	27
Project Cycle Mgmt	182	122	60	3	0	21	24
Basic Mgmt	340	122	218	11	0	21	32
Performance Appraisal	349	122	227	11	0	21	32
Procurement	156	122	34	2	0	21	22
Teacher Development	301	122	179	9	0	21	30
Mgmt S I Functions	300	122	178	9	0	21	29
TOTALS:	5400	2431	2969				685

TABLE 6.16c: TRAINING FOR SUSTAINABILITY: SELECTIVE MODEL							
FUNCTIONAL AREAS	TUN	TOTAL CRITICAL MASS	SUSTAINABILITY BASE	BUDGET FACTOR	GAP FACTOR	EXODUS FACTOR	ANNUAL TRAINING NEEDS
SYSTEM GAP							
Policy Analysis	115	215	-100	-7	15	32	40
MIS	557	248	309	22	17	32	71
M/E	557	248	309	22	17	32	71
Public Communication	459	248	211	15	17	32	64
Planning/Budgeting Link	638	248	390	27	17	32	76
Organizational Development	970	248	722	51	17	32	100
SERVICE DELIVERY							
ABE	0	0	0	0	0	0	0
Counseling	0	0	0	0	0	0	0
Mgmt Spec Services	164	122	42	3	9	0	11
OTHER							
Curriculcum R & D	203	122	81	6	9	16	30
Project Cycle Mgmt	153	122	31	2	9	16	27
Basic Mgmt	269	122	147	10	9	16	35
Performance Appraisal	324	122	202	14	9	16	39
Procurement	131	122	9	1	9	16	25
Teacher Development	299	122	177	12	9	16	37
Mgmt S I Functions	298	122	176	12	9	16	37
TOTALS:	5136	2431	2705				660

TABLE 9.2: CRITICAL MASS TRAINING COSTS

FUNCTIONAL AREAS	WEEKLY RATE *	EXEC.	EXEC. COST	MIDDLE MGMT **	M. MGMT COST	SUPER.	SUPER. COST	CLERICAL	CLERICAL COST	TOTAL COST
SYSTEM GAP										
Policy Analysis	1100	10	22,000	81	891,000	124	148,800	0	0	1,061,800
MIS	800	10	16,000	81	648,000	124	148,800	33	16,500	829,300
M/E	800	10	16,000	81	648,000	124	148,800	33	16,500	829,300
Public Communication	1100	10	22,000	81	891,000	124	148,800	33	16,500	1,078,300
Planning/Budgeting Link	800	10	16,000	81	648,000	124	148,800	33	16,500	829,300
Organizational Development	1100	10	22,000	81	891,000	124	148,800	33	16,500	1,078,300
SERVICE DELIVERY										
ABE	800	10	16,000	59	472,000	42	50,400	11	5,500	543,900
OTHER										
Curriculcum R & D	800	10	16,000	59	472,000	42	50,400	11	5,500	543,900
Project Cycle Mgmt	800	10	16,000	59	472,000	42	50,400	11	5,500	543,900
Basic Mgmt	800	10	16,000	59	472,000	42	50,400	11	5,500	543,900
Performance Appraisal	800	10	16,000	59	472,000	42	50,400	11	5,500	543,900
Procurement	800	10	16,000	59	472,000	42	50,400	11	5,500	543,900
Teacher Development	800	10	16,000	59	472,000	42	50,400	11	5,500	543,900
Mgmt S I Functions	800	10	16,000	59	472,000	42	50,400	11	5,500	543,900
TOTALS:		140	242,000	958	8,393,000	1080	1,296,000	253	126,500	10,057,500

Cost Per Week: Supervisory	R600	
Cost Per Week: Clerical	R500	
Number of Weeks for Executives =	2	weeks
Number of Weeks for M. Management	10	weeks
Number of Weeks for Supervisory =	2	weeks
Number of Weeks for Clerical =	1	weeks

NOTE: * These weekly rates apply only to Executive and Middle Management

** Includes 48 Training Providers in Systems Gaps Areas and Other Areas

TABLE 9.3a: ANNUAL SUSTAINABILITY COSTS: COMPRHENSIVE STAFFING MODEL										
FUNCTIONAL AREAS	ATN	EXEC. FACTOR	EXEC. COSTS	M. MGMT FACTOR	M. MGMT COSTS	SUPERV. FACTOR	SUPERV. COSTS	CLERICAL FACTOR	CLERICAL COSTS	TOTAL COSTS
SYSTEM GAP										
Policy Analysis	90.5	24	2,217	1054	95,379	253	22,932	172	15,527	136,055
MIS	136.9	24	3,352	1054	144,192	253	34,668	172	23,474	205,686
M/E	136.9	24	3,352	1054	144,192	253	34,668	172	23,474	205,686
Public Communication	129.0	24	3,160	1054	135,933	253	32 682	172	22,129	193,904
Planning/Budgeting Link	145.5	24	3,565	1054	153,342	253	36,867	172	24,964	218,737
Organizational Development	179.6	24	4,399	1054	189,223	253	45,494	172	30,805	269,921
SERVICE DELIVERY										
ABE	6.0	24	148	1054	6,356	253	1,528	172	1,035	9,067
OTHER										
Curriculcum R & D	42.4	24	1,037	1054	44,628	253	10,730	172	7,265	63,661
Project Cycle Mgmt	37.7	24	924	1054	39,742	253	9,555	172	6,470	56,690
Basic Mgmt	56.9	24	1,393	1054	59,909	253	14,404	172	9,753	85,459
Performance Appraisal	61.1	24	1,496	1054	64,356	253	15,473	172	10,477	91,802
Procurement	43.5	24	1,067	1054	45,882	253	11,031	172	7,469	65,449
Teacher Development	50.7	24	1,242	1054	53,426	253	12,845	172	8,698	76,210
Mgmt S I Functions	50.6	24	1,240	1054	53,340	253	12,824	172	8,684	76,087
TOTALS:	1167.4		28,590		1,229,900		295,700		200,224	1,754,414

NOTES:			
	Cost Per Week: Executive	R800	ATN = Annual Training Need
	Cost Per Week: Middle	R800	
	Cost Per Week: Supervisory	R600	
	Cost Per Week: Clerical	R500	
	Number of Weeks for Executives =	2	
	Number of Weeks for M. Management	6	
	Number of Weeks for Supervisory =	1	
	Number of Weeks for Clerical =	1	
	Executive Proportion =	0.015	
	M. Management Proportion =	0.219	
	Supervisory Proportion =	0.422	
	Clerical Proportion =	0.343	

TABLE 9.3b: ANNUAL SUSTAINABILITY COSTS: MIXED STAFFING MODEL										
FUNCTIONAL AREAS	ATN	EXEC. FACTOR	EXEC. COSTS	M. MGMT FACTOR	M. MGMT COSTS	SUPERV. FACTOR	SUPERV. COSTS	CLERICAL FACTOR	CLERICAL COSTS	TOTAL COSTS
SYSTEM GAP										
Policy Analysis	59.8	24	1,428	1055	63,132	537	32,114	159	9,517	106,192
MIS	82.3	24	1,964	1055	86,820	537	44,164	159	13,088	146,037
M/E	82.3	24	1,964	1055	86,820	537	44,164	159	13,088	146,037
Public Communication	80.1	24	1,912	1055	84,494	537	42,981	159	12,738	142,124
Planning/Budgeting Link	84.3	24	2,012	1055	88,924	537	45,234	159	13,405	149,575
Organizational Development	99.0	24	2,364	1055	104,491	537	53,153	159	15,752	175,760
SERVICE DELIVERY										
ABE	2.2	24	52	1055	2,285	537	1,163	159	345	3,844
OTHER										
Curriculcum R & D	27.1	24	647	1055	28,574	537	14,535	159	4,308	48,063
Project Cycle Mgmt	23.6	24	563	1055	24,896	537	12,664	159	3,753	41,877
Basic Mgmt	31.5	24	752	1055	33,255	537	16,916	159	5,013	55,937
Performance Appraisal	31.9	24	762	1055	33,695	537	17,140	159	5,080	56,677
Procurement	22.3	24	532	1055	23,516	537	11,962	159	3,545	39,556
Teacher Development	29.5	24	705	1055	31,160	537	15,851	159	4,697	52,413
Mgmt S I Functions	29.5	24	704	1055	31,116	537	15,828	159	4,691	52,339
TOTALS:	685.5		16,363		723,177		367,870		109,021	1,216,431

NOTES:			
	Cost Per Week: Executive	R800	ATN = Annual Training Need
	Cost Per Week: Middle	R800	
	Cost Per Week: Supervisory	R600	
	Cost Per Week: Clerical	R500	
	Number of Weeks for Executives =	2	
	Number of Weeks for M. Management	6	
	Number of Weeks for Supervisory =	2	
	Number of Weeks for Clerical =	1	
	Executive Proportion =	0.015	
	M. Management Proportion =	0.220	
	Supervisory Proportion =	0.447	
	Clerical Proportion =	0.318	

TABLE 9.3c: ANNUAL SUSTAINABILITY COSTS: SELECTIVE STAFFING MODEL

FUNCTIONAL AREAS	ATN	EXEC. FACTOR	EXEC. COSTS	M. MGMT FACTOR	M. MGMT COSTS	SUPERV. FACTOR	SUPERV. COSTS	CLERICAL FACTOR	CLERICAL COSTS	TOTAL COSTS
SYSTEM GAP										
Policy Analysis	39.7	24	938	1080	42,912	565	22,431	145	5,753	72,033
MIS	70.7	24	1,669	1080	76,352	565	39,910	145	10,237	128,168
M/E	70.7	24	1,669	1080	76,352	565	39,910	145	10,237	128,168
Public Communication	63.8	24	1,507	1080	68,942	565	36,037	145	9,244	115,729
Planning/Budgeting Link	76.3	24	1,802	1080	82,439	565	43,092	145	11,053	138,386
Organizational Development	99.6	24	2,351	1080	107,582	565	56,235	145	14,424	180,592
SERVICE DELIVERY										
ABE	11.5	24	270	1080	12,369	565	6,465	145	1,658	20,762
OTHER										
Curriculcum R & D	30.0	24	709	1080	32,428	565	16,951	145	4,348	54,435
Project Cycle Mgmt	26.5	24	627	1080	28,671	565	14,987	145	3,844	48,128
Basic Mgmt	34.6	24	818	1080	37,421	565	19,560	145	5,017	62,816
Performance Appraisal	38.5	24	909	1080	41,614	565	21,752	145	5,579	69,855
Procurement	25.0	24	591	1080	27,031	565	14,129	145	3,624	45,375
Teacher Development	36.8	24	868	1080	39,713	565	20,758	145	5,325	66,663
Mgmt S I Functions	36.7	24	867	1080	39,659	565	20,730	145	5,317	66,574
TOTALS:	660.5		15,592		713,484		372,947		95,661	1,197,685

NOTES:

Cost Per Week: Executive	R800
Cost Per Week: Middle	R800
Cost Per Week: Supervisory	R600
Cost Per Week: Clerical	R500
Number of Weeks for Executives =	2
Number of Weeks for M. Management	6
Number of Weeks for Supervisory =	2
Number of Weeks for Clerical =	1
Executive Proportion =	0.015
M. Management Proportion =	0.225
Supervisory Proportion =	0.471
Clerical Proportion =	0.290

ATN = Annual Training Need