

*Achieving Universal Education
for a Better Future*

**Universal Basic Education Plan
2010 - 2019**

**National Executive Council
December 2009**



**Papua New Guinea
Department of Education**

MESSAGE FROM THE MINISTER FOR EDUCATION

It gives me great pleasure to introduce this Plan to you. Children are the focus of our work in the education system. We must ensure that they start their life well with a basic education. It is a right of all children, both boys and girls, in Papua New Guinea as stated in the National Constitution to have a basic education.

The Universal Basic Education Plan 2010-2019 builds on the progress made in the National Education Plan 2005-2014. It was developed to ensure that all school-aged children have equal access to quality basic education which provides them with life-long skills in order to contribute to the development of the country. A basic education is therefore critical for Papua New Guineans to participate in modern society.

Since independence Papua New Guinea has made enormous progress in achieving government objectives. Much has also been achieved as a result of the National Education Plans 1995-2004 and 2005-2014. However, much still remains to be done in order for Papua New Guinea to realise its international commitments, especially towards the Convention of the Rights of the Child which recognises that education is a right that belongs to all children without any form of discrimination, the Education For All (EFA) and the Millennium Development Goals (MDG). I believe that this Plan will help us to achieve these targets.

The success of this Plan will depend on the commitment and support from parents, community members, teachers, church and donor agencies, and all levels of government. Critical here is that our districts must be adequately funded in order to support the maintenance and upkeep of basic education infrastructure. We all have an important role to play in order to ensure that all our children have access to quality basic education.

I would like to commend all our partners who have contributed in one way or another in developing this Plan. I know that the Task Force was challenged to complete the plan in a shorter timeframe compared to the National Education Plan. However, under the exceptional leadership and guidance of Chairman and Director for National Research Institute, Dr Thomas Webster together with the wealth of knowledge and experience from the members has contributed to the completion of this Plan.

We need to provide the foundation to a happy, healthy and wealthy Papua New Guinea through quality basic education.

Honourable James Marape, MP

Minister for Education
October, 2009

SECRETARY'S MESSAGE

We are very proud that the National Executive Council has approved the Universal Basic Education Plan for 2010-2019. The title of the Plan is "*Achieving Universal Education for a Better Future*".

We chose this title because the Plan was extracted from the National Education Plan for 2005- 2014. This Plan specifically mentions:

- At 6 years of age all children begin their basic education in an elementary school in a language that they speak. For the next three years they develop the basis for sound literacy and numeracy skills, family and community values including discipline, personal health care, and respect for others;
- At 9 years of age children continue their basic education in a primary school. After six years of primary education that begins with a bilingual programme, children have the skills to live happily and productively, contribute to their traditional communities and use English to understand basic social, scientific, technological, and personal concepts and value learning after Grade 8.

Based on the vision in the NEP 2005-2014 and mission statements, the overarching Goal of the UBE Plan is as follows:

"All children of school age must enrol in school, complete nine years of basic education and should have learnt skills, knowledge and values covered in the basic education curriculum".

It is expected that this Plan will:

- play a key role in the reduction of poverty and societal inequality through the implementation of strategic actions to allow for equal opportunities for all;
- identify strategic solutions for certain key issues, such as reforming education management structures and building institutional capacity to allow for the attainment of the basic education goals as expressed in the National Education Plan.

Major initiatives during the Plan period include the construction of new classrooms, new staff houses, more elementary teachers will be trained and infrastructure will be upgraded.

This plan is the result of extensive nationwide consultations and forums. I am very grateful to the chairman of the UBE Task Force, Dr Thomas Webster, and his committee members, and the Department's planning team, for the commitment and experience that they have brought to their task.

The National Constitution of PNG makes it explicit that all children have the right to quality education. The constitution is clear about the government's responsibility to make the benefits of education available to all citizens.

This Plan belongs to us Papua New Guineans and is about *Achieving Universal Basic Education for a Better Future* for all our children. I call on all our stakeholders – parents, community, teachers, churches, NGOs, the Government and donors for their continued support in realizing our UBE goal.

Dr Joseph Pagelio

Secretary for Education
October, 2009

TABLE OF CONTENTS

Message from the Minister for Education.....	i
Secretary’s Message.....	ii
Table of Contents.....	iii
List of Tables.....	vi
List of Figures.....	vii
Acronyms.....	viii
Definitions.....	ix
CHAPTER 1 INTRODUCTION.....	1
1.1 Rationale.....	1
1.2 Definition of UBE in the Papua New Guinea Context.....	1
1.3 Guiding principles.....	1
1.4 Guiding International and National Policies.....	2
1.4.1 International Policy.....	2
1.4.2 National Policy.....	2
1.5 Country Overview.....	3
1.5.1 Geography.....	3
1.5.2 Demography.....	3
1.5.3 Economy.....	4
1.5.4 Government.....	5
1.5.5 Other Social Issues.....	5
1.6 Terminology.....	6
CHAPTER 2 SITUATIONAL ANALYSIS.....	7
2.1 Introduction.....	7
2.2 The Status of the Structural Reform of the Education System.....	8
2.3 Availability of Data.....	9
2.4 The Key Indicators.....	9
2.5 Access.....	9
2.6 Retention.....	13
2.7 Enrolment Rates.....	15
2.8 Quality of Learning.....	17
2.9 Education Management.....	19
2.10 Equity Issues.....	21
CHAPTER 3 THE UBE GOAL - RESPONSE TO SITUATION.....	24
3.1 Vision.....	24
3.2 Mission.....	24
3.3 Main UBE Goals and Objectives.....	24
CHAPTER 4 RESULTS, OUTPUTS AND ACTIVITIES.....	26
4.1 Access Improved.....	28
4.1.1 Expansion of Elementary School Infrastructure.....	28
4.1.2 Expansion of Primary School Infrastructure.....	30
4.1.3 Construction of Primary School Teacher Housing.....	31
4.1.4 Provision of Access to Basic Education for Over-age Children.....	32

4.2	Retention Enhanced	32
4.2.1	Provision of Grants and Abolition of School Fees	33
4.2.2	Advocacy and Raising Awareness on Basic Education.....	34
4.2.3	Provision of Water and Sanitation Facilities in All Schools.....	34
4.3	Quality of Education Improved.....	35
4.3.1	Pre-Service Basic Education Teacher Training	36
4.3.2	In-Service Basic Education Teacher Training	37
4.3.3	Provision of Education Materials.....	37
4.3.4	Library Development and Maintenance.....	38
4.3.5	Maintenance of Elementary and Primary Schools.....	39
4.3.6	Maintenance of Minimum Number of Learning Hours.....	39
4.4	Basic Education Management Enhanced (at ALL Levels)	39
4.4.1	Training of Headteachers on Administration, Finances and General Management	40
4.4.2	Technical and Planning Support for District Education Administrators	40
4.4.3	Support to School Inspectors	41
4.4.4	Support for the Provincial and National Education Authorities	42
4.4.5	Research Studies to be Conducted.....	42
4.5	Equity Enhanced	42
4.5.1	Gender.....	43
4.5.2	Provision of Special Needs Education.....	43
4.5.3	HIV/Aids.....	43
4.5.4	Most Vulnerable Children.....	44
4.5.5	Remote and Over-crowded Schools.....	44
4.6	Implications for Post Primary Education	45
CHAPTER 5 BUDGET OF UBE		47
5.1	Access Improved.....	47
5.1.1	Expansion of Elementary School Infrastructure	47
5.1.2	Expansion of Primary School Infrastructure.....	47
5.1.3	Construction of Primary School Teacher Housing	48
5.1.4	Provision of Access to Basic Education for Over-age Children.....	48
5.2	Retention Enhanced	49
5.2.1	Provision of Grants and Abolition of School Fees	49
5.2.2	Advocacy and Raising Awareness on Basic Education.....	51
5.2.3	Provision of Water and Sanitation Facilities in All Schools.....	51
5.3	Quality of Education Improved.....	52
5.3.1	Pre-Service Basic Education Teacher Training	52
5.3.2	In-Service Basic Education Teacher Training	53
5.3.3	Provision of Education Materials.....	54
5.3.4	Library Development and Maintenance.....	54
5.3.5	Maintenance of Elementary and Primary Schools.....	55
5.4	Basic Education Management Improved	55
5.4.1	Training of Headteachers on Administration, Finances and General Management.	56
5.4.2	Technical and Planning Support to District Education Administrators	56
5.4.3	Support to School Inspectors	57
5.4.4	Support for the Provincial and National Education Authorities	57
5.4.5	Research Studies to be Conducted.....	57
5.5	Equity Enhanced	58
5.5.1	Gender.....	58
5.5.2	Provision of Special Needs Education.....	58
5.5.3	HIV/Aids.....	59
5.5.4	Most Vulnerable Children.....	59
5.5.5	Provision for Remote Schools and Over-crowded schools.....	59

5.6	Salaries and Secondary Benefits	60
5.6.1	Salaries.....	60
5.6.2	Leave Fares	61
5.7	Department and Provincial Administrative Costs.....	61
5.8	Total Costs	62
CHAPTER 6	FINANCING OF UBE	63
6.1	UBE Financing Gap.....	63
6.2	Existing Funding.....	63
CHAPTER 7	MANAGEMENT AND IMPLEMENTATION	65
7.1	Introduction.....	65
7.2	National Management and Administration	65
7.3	Provincial Management and Administration	66
7.4	District Management and Administration.....	67
7.5	School Management and Administration.....	67
7.5.1	Provincial and District Education Structures	68
7.5.2	Teacher Management.....	68
7.6	Consultative and Reporting Processes	68
CHAPTER 8	MONITORING AND EVALUATION	70
8.1	Monitoring	70
8.2	UBE Progress Indicators.....	70
8.3	UBE Plan Implementation Indicators	71
8.4	Financial Indicators.....	71
8.5	Performance Assessment Framework.....	71
8.6	Overall Education Indicators	74
8.6.1	Education Indicators	74
8.6.2	Management Indicators.....	Error! Bookmark not defined.
8.6.3	Financial Indicators.....	Error! Bookmark not defined.

LIST OF TABLES

Table 1.	Papua New Guinea Provinces, Districts and Population, 2009	4
Table 2.	Overall Papua New Guinea Country Data, 2007.....	4
Table 3.	Terminology NEP versus UBE Plan	6
Table 4.	Number of Schools and Enrolment by Administering Agency, 2006	8
Table 5.	Progress of Structural Reform by Provinces, 2008	8
Table 6.	Grade 1 Enrolment and Gross Admission Rates, 2000-2007	10
Table 7.	School Entrants by Type of School, 2000-2007	10
Table 8.	Elementary Prep Enrolment by Age, 2007	11
Table 9.	Net Admission Ratios by Province, 2007.....	12
Table 10.	Grade 1 to 6 Retention Rates by Gender for Cohorts, 1995-2001.....	13
Table 11.	Grade 1 to 6 Completion Rates by Province and Gender for Cohort Completing, 2007 13	
Table 12.	Gross Enrolments Ratios by year, 2000-2006	15
Table 13.	Net and Gross Enrolment Ratios by Province, 2007	16
Table 14.	Gender Parity Indices for Net and Gross Enrolment Rates by Province, 2007	16
Table 15.	Numbers of School-aged Children In- and Out of School, 2007	17
Table 16.	Student Performance Grade 8, 2006.....	18
Table 17.	Responsibilities in the PNG Education Sector by Level of Government	20
Table 18.	Gross & Net Admission and Enrolment Rates, 2010-2019.....	26
Table 19.	Elementary School Enrolments by Grade, 2010-2019	29
Table 20.	Elementary School Staffing by Grade, 2010-2019.....	30
Table 21.	Primary School Enrolment by Grade, 2010-2019	31
Table 22.	Primary School Staffing by Grade, 2010-2019	31
Table 23.	Grade 1 to 6 Retention by Year and Gender.	32
Table 24.	Grade 8 completion rates by Year and Gender.....	33
Table 25.	Basic Education Teacher Requirements by Year, 2010-2019	36
Table 26.	Secondary School Enrolments by Grade, 2010-2019.....	45
Table 27.	Secondary School Staffing, 2010-2019	45
Table 28.	Vocational Education Enrolments and Staffing, 2010 to 2019	46
Table 29.	Cost of Elementary School Classrooms, 2010-2019	47
Table 30.	Cost of Primary School Classrooms, 2010-2019.....	48
Table 31.	Primary School Teacher Housing Construction, 2010-2019.....	48
Table 32.	Cost for Basic Education for Over-age Children, 2010-2019	49
Table 33.	Total Costs for Improved Access Interventions, 2010-2019.....	49
Table 34.	Enrolments of Pupils by Sector, 2010-2019	50
Table 35.	Subsidy per Pupil by Sector, 2010-2019	50
Table 36.	Total Subsidies by Sector, 2010-2019.....	50
Table 37.	Grants to Districts for Primary Schools, 2010-2019	51
Table 38.	Advocacy and Awareness Raising, 2010-2019	51
Table 39.	Provision of Water and Sanitation Facilities, 2010-2019.....	52
Table 40.	Total Costs for Enhanced Retention Interventions, 2010-2019.....	52
Table 41.	Elementary Pre service Teacher Education, 2010-2019.....	53
Table 42.	Primary Pre-service Teacher Education, 2010-2019	53
Table 43.	In-Service Training Cost, 2010-2019	53

Table 44.	Text Book Supply and Re-supply, 2010-2019	54
Table 45.	School Library Facilities and Books, 2010-2019	54
Table 46.	Maintenance and Upgrading Cost, 2010-2019	55
Table 47.	Total Costs Improved Quality of Education Interventions, 2010-2019	55
Table 48.	Training of Headteachers, 2010-2019	56
Table 49.	Support to District Education Administrators, 2010-2019	56
Table 50.	Support to School Inspectors, 2010-2019.....	57
Table 51.	Capacity building for Provincial and National Education Authorities, 2010-2019.....	57
Table 52.	Total Costs for Research Studies, 2010-2019	58
Table 53.	Total Costs for Improved Basic Education Management Interventions, 2010-2019....	58
Table 54.	Special Needs Education Requirements, 2010-2019	59
Table 55.	Remote and Over-crowded Schools Requirements, 2010-2019	59
Table 56.	Total Costs for Equity Interventions, 2010-2019	60
Table 57.	Total Costs for all Interventions to Achieve UBE, 2010-2019	60
Table 58.	Teacher Salaries, 2010-2019	61
Table 59.	Leave Fares Cost, 2010-2019	61
Table 60.	DoE and Provincial Administrative Requirements, 2010-2019	61
Table 61.	All Cost for UBE plan Implementation	62
Table 62.	Funding Required by Source, Funding Available, and the Gap	64

LIST OF FIGURES

Figure 1.	Linkage of the UBE Plan to other Existing Plans and Policies	2
Figure 2.	Map Papua New Guinea.....	3
Figure 3.	The Old Education Structure	7
Figure 4.	The New Education Structure.....	7
Figure 5.	Elementary Prep Age Structure, 2007	11
Figure 6.	Overview Status PNG Universal Basic Education	23
Figure 7.	Interventions Tree PNG Universal Basic Education	27
Figure 8.	DoE and Stakeholders Joint Monitoring Mechanisms	72

ANNEX A: Enrolments by Gender Elementary, Lower and Upper Primary School

ACRONYMS

BEDP	Basic Education Development Programme
BOM	Board Of Management (primary schools)
COBE	Certificate Of Basic Education
CSMT	Curriculum Standard Monitoring Tests (Grades 5 and 7).
DDP	District Development Plan
DEA	District Education Administrator
DEP	District Education Plan
DMT	District Management Team
DOE	Department of Education
DSIP	District Services Improvement Plan
DSIP	District Services Improvement Programme
EFA	Education For All
EMIS	Education Management Information System
GER	Gross Enrolment Ratio
GoPNG	Government of Papua New Guinea
GPI	Gender Parity Index
LLG	Local-level Government
MTDS	Medium Term Development Strategy
NCD	National Capital District
NEB	National Education Board
NEP	National Education Plan 2005-2014
NER	Net Enrolment Rate
NRI	National Research Institute
OBC	Outcome Based Curriculum
PEA	Provincial Education Advisor
PEB	Provincial Education Board
PEP	Provincial Education Planner
PGAS	Public Government Accounting System
PISTO	Provincial In-Service Training Officer
SLIP	School Learning Improvement Plan
TIP	Teacher In-service Plan
TMS	Treasury Management System
UBE	Universal Basic Education

DEFINITIONS

INDICATOR	DEFINITION	PURPOSE
Net Enrolment Ratio	Enrolment of the official age-group for a given level of education expressed as a percentage of the corresponding population.	To show the extent of participation in a given level of education of children and youths belonging to the official age-group corresponding to the given level of education.
Gross Enrolment Ratio	Total enrolment in a specific level of education, regardless of age, expressed as a percentage of the eligible official school-age population corresponding to the same level of education in a given school-year.	Gross Enrolment Ratio is widely used to show the general level of participation in a given level of education. It indicates the capacity of the education system to enrol pupils of a particular age-group. It is used as a substitute indicator to net enrolment ratio (NER) when data on enrolment by single years of age are not available. Furthermore, it can also be a complementary indicator to NER by indicating the extent of over-aged and under-aged enrolment.
Elementary Education	Elementary education is the first stage of formal education. It consists of an Elementary Preparatory Grade, Elementary Grade 1 and Elementary Grade 2 in the language of the child's community. These three years of education prepare a child for entry into primary school at Grade 3.	
Primary Education	Primary education begins at Grade 3 and finishes in Grade 8 and caters for the 9 to 14 year age group. Lower primary education comprises Grades 3 to 5, and upper primary Grades 6 to 8	
Gross Admission Ratio	Total number of new entrants in the preparatory Grade, regardless of age, expressed as a percentage of the population at the official school-entrance age.	Apparent Intake Ratio indicates the general level of access to primary education. It also indicates the capacity of the education system to provide access to elementary prep for the official school-entrance age population. This indicator is used as a substitute to Net Intake Ratio (NIR) in the absence of data on new entrants by single years of age.
Net Admission Ratio	New entrants in the preparatory grade of elementary education who are of the official elementary prep school-entrance age, expressed as a percentage of the population of the same age.	To show the level of access to elementary education of the eligible population of elementary school-entrance age.
Transition Ratio	The number of students admitted to the first Grade of a higher level of education in a given year, expressed as a percentage of the number of students enrolled in the final Grade of the lower level of education in the previous year.	This indicator conveys information on the degree of access or transition from one cycle or level of education to a higher one. Viewed from the lower cycle or level of education, it is considered as an output indicator. Viewed from the higher educational cycle or level, it constitutes an indicator of access. It can also help in assessing the relative selectivity and efficiency of an education system, which can be due to pedagogical or financial requirements.

<p>Survival Ratio by Grade</p>	<p>Percentage of a cohort of pupils enrolled in the first Grade of a given level or cycle of education in a given school-year who are expected to reach successive grades.</p>	<p>Survival ratio measures the holding power and internal efficiency of an education system. It illustrates the situation regarding retention of pupils from grade to grade in schools, and conversely the magnitude of drop-out by grade.</p>
<p>Pupil:Teacher Ratio</p>	<p>Average number of pupils per teacher at a specific level of education in a given school-year.</p>	<p>This indicator is used to measure the level of human resources input in terms of number of teachers in relation to the size of the pupil population. It should normally be used to compare with established national norms on the number of pupils per teacher for each level or type of education.</p>

CHAPTER 1 INTRODUCTION

1.1 Rationale

A Basic Education For All (EFA) is critical if all citizens are to participate in a modern society. This is a right for all children, both boys and girls, in Papua New Guinea as stated in the National Constitution. A basic education is essential for the personal development of all people to provide them with the skills and knowledge to improve their quality of life.

Basic education is the building block on which all other levels of education, both formal and non-formal, are built upon:

- Basic education provides literacy and numeracy skills as well as an appreciation of the science and social sciences. This will contribute to a better understanding of the outside world and lead to a greater engagement both in the development of PNG and as members of the global community;
- Education provides opportunities for disadvantaged groups in society to participate in and benefit from national development;
- Increasing opportunities for girls' education is critical to reducing gender imbalances and harnessing their input to nation building.

The education of girls in particular has a multiplier effect. Evidence has shown that educating girls eases the strain on the health care system by reducing child and maternal mortality, reduces the incidence of HIV/AIDS and contributes to economic growth by increasing women's skills and knowledge. Mothers who have benefited from a basic education are far more likely to send their own children to school, so the multiplier effect continues onto the next generation.

PNG's social and economic status is severely affected by the fact that some 50 per cent of the adult population has not had the benefit of a basic education meaning that many in the population are not truly literate. This in turn means that a large percentage of the population is unable to engage fully in personal, community and national development.

PNG will not develop socially and economically if its people do not have a basic education. Achieving Universal Basic Education, then, is critical for the future development of Papua New Guinea.

1.2 Definition of UBE in the Papua New Guinea Context

The definition of Universal Basic Education varies from country to country. Prior to the 1990s, most countries defined basic education as being between four and six years of primary education. Many countries, like PNG, are now of the view that nine years of basic education is required to prepare its people for life in an increasingly sophisticated world. Most countries that have already achieved a basic education for all are now able to provide additional years of secondary education.

In PNG there are three components to Universal Basic Education:

- **Access** - All children should enter school at a specific age – they should enter elementary prep at the age of 6 years;
- **Retention** - All children should complete the elementary and primary cycles of education that constitute a basic education – this is nine years of basic education;
- **Quality** - All children should reach a required standard of literacy and numeracy at the end of these years of education.

1.3 Guiding principles

The UBE strategic plan was developed based on the following guiding principles:

- The PNG Constitution which states that Basic Education is a right for all its citizens;
- National development policies, principally the Medium Term Development Strategy, that identify education as a priority for development;

- The need to achieve the human development and education goals as set out in the Millennium Development Goals;
- Principles of dialogue, engagement, participation, equity and opportunities.

1.4 Guiding International and National Policies

1.4.1 International Policy

The plan is in line with the international commitments that PNG has made.

PNG was one of the first countries to ratify the Convention of the Rights on the Child in 1989 which recognizes that education is a right that belongs to all children without any form of discrimination. In addition, PNG committed itself to achieving Education for All at Jomtien in 1990 and the Millennium Development Goals in 2000, of which Goals 2 and 3 are of direct relevance:

Goal 2 - Achieve universal primary education

Goal 3 - Promote gender equality and empower women

UNESCO policies and strategies will continued to be closely considered and adapted to the PNG situation where appropriate.

1.4.2 National Policy

The UBE Plan is linked to- and complements existing plans and policies which the government has endorsed to address basic education issues. These include the National Education Plan 2005-2014, and the Medium Term Development Strategy 2005-2010

PNG has a decentralized education system and planning occurs at three levels as is also described in section 2.3.1. Figure 1 shows how this Plan relates to other plans and policies.

Figure 1. Linkage of the UBE Plan to other Existing Plans and Policies



1.5 Country Overview

PNG is a highly diverse country and the proposed interventions to achieve UBE have had to take this into account. This section provides a short country overview.

1.5.1 Geography

Papua New Guinea has a landmass of 463,000 square kilometres with 85% on the mainland, and the remainder spread over some 600 islands. The mainland of PNG has some of the most rugged terrain in the world with rainforest covering 75% of the land. It is estimated that only 5% is suitable for large-scale cultivation. PNG borders Australia to the south, Indonesia to the northwest, the Solomon Islands to the southeast and the Federated State of Micronesia to the northeast.

1.5.2 Demography

The population of PNG is about 6.5 million in 2009, based upon the 2000 national census, with an annual estimated growth rate of 2.7%. It is estimated that about 85% of the people live in the rural areas, spread across 20 provinces and 89 districts. The following map shows the different provinces and their provincial centres.

Figure 2. Map Papua New Guinea



Table 1 shows the provinces, the number of districts in each province as well as their population and population density. The very wide range of population density is particularly noteworthy.

Table 1. Papua New Guinea Provinces, Districts and Population, 2009

Province	# of Districts	Population (2009 est.)	Population Density (person/km ²)
Western	3	191,456	3
Gulf	2	133,501	4
National Capital	3	317,409	1,337
Central	4	229,770	8
Milne Bay	4	262,776	19
Oro	2	166,180	8
Southern Highlands	8	682,210	29
Eastern Highlands	8	540,723	48
Simbu	6	324,333	53
Western Highlands	7	549,531	66
Enga	5	368,453	29
Morobe	9	673,642	20
Madang	6	455,967	17
West Sepik	4	231,965	6
East Sepik	6	428,586	10
Manus	1	54,184	27
New Ireland	2	147,803	15
East New Britain	4	274,916	18
West New Britain	2	230,425	11
AR Bougainville	3	218,751	19
PNG	89	6,482,580	14

Approximately 860 different languages are spoken, and there is an equivalent diversity in culture and traditions. Many of those living in the more remote regions of the country have only been exposed to the outside world during the last fifty years. The official language is English although many people use *tok pisin* as a lingua franca.

The 2000 census estimates 45% of the population to be below the age of 15 years and life expectancy to be as low as 57 years for the population as a whole. The Papua New Guinea Human Development Report has projected that by 2010 the school age population and the economically active population will have grown by 45% and 67% respectively (Office of National Planning, 1999).

1.5.3 Economy

PNG has abundant natural resources including gold, oil, copper, oil, natural gas, timber and fisheries. Despite this, more than 40% of the population survives on less than one US dollar a day and about half of the adult population is illiterate. The country is ranked 148th on the UNDP Human Development Index (UNDP 2009). Table 2 below shows several other key demographic, economic and health indicators.

Table 2. Overall Papua New Guinea Country Data, 2007

Population	6.331 M
Population under 18	2.941 M
GNI per capita Atlas Method (US\$)	850
Population Growth (annual %) (1990-2007)	2.5
Infant Mortality Rate (under 1 per 1,000 live births)	50
Urban Population (% of total population)	14
Life Expectancy at birth	57
Adult Literacy Rate	58
Access to improved water source (% of population)	40
HIV/AIDS prevalence (% of ages 15 to 49)	1.5

http://www.unicef.org/infobycountry/papuang_statistics.html

1.5.4 Government

Papua New Guinea became independent in 1975. New Guinea was administered by the Germans from 1880 to 1914 and after the First World War, it was administered by the United Nations. Papua, the southern mainland region, was a British colony until 1948 when Australia assumed joint administrative responsibility under the auspices of the United Nations.

Following independence, Papua New Guinea adopted a parliamentary form of government. The current single chamber parliament has 109 members with one person representing each of the 19 provinces and the National Capital District. In addition, and in line with the number of districts there are 89 open electorates. The Prime Minister and the Cabinet are chosen from the members of parliament. General elections are held every five years and a government cannot be changed for the first eighteen months after assuming power. Provinces have considerable autonomy, but rely to a large extent on the national government for funding. For example, provinces are responsible for literacy programmes, primary and secondary education (with the exception of curriculum development). Finance is the major state-controlling mechanism on national and provincial government operations.

The single most important change on the political front since 1975 has been the 1995 changes to the Organic Law on Provincial and Local-level Government. In simple terms, these changes allocated responsibility for national policy and planning to the national government while the provinces became responsible for implementation. The second tier of government at the provincial level now comprises members of the National Parliament - the regional member becoming the Governor - and the Presidents of the Local-level Governments.

1.5.5 Other Social Issues

The National Government addresses the dysfunctional system of service delivery in all sectors that has arisen following the 1995 reforms to PNG's system of decentralised government. There are major social issues threatening the welfare of PNG society. Consequently, under the Medium Term Development Strategies (MTDS) the government has renewed the emphasis on the need to identify practical solutions to address the current constraints to service delivery through the line government departments and central agencies. For instance the MTDS gives basic education and literacy a high priority as leverage for eradicating poverty, improving literacy rate and increasing the human resource in the country. The Department of Education (DoE) ten year plan (2005-2014) also provides guidance to address some of the major issues mentioned below.

Political instability, corruption and poor surveillance of the border all contribute to a poor law and order situation. Crime rates in PNG are high and the Global Peace Index 2009 ranks the country 93 out of 144. The prevalence of violent crime involving the use of firearms is rising. In the rural communities ethnic group fighting and sorcery remain commonplace. Serious crimes against the person, particularly rape, are prevalent in all areas. More sophisticated white collar crime and fraud are on the increase in major centres.

Today's children and urban youths increasingly grow up alienated from their communities as well as their customary duties and obligations. Many of them do not have the qualifications that allow them to compete in the job market and to take advantage of increasing job opportunities. The improvement of formal and informal education is considered to be critical to enhancing the security situation.

HIV/Aids is one of the most significant threats to the health of PNG. First identified in 1987 HIV has spread rapidly and is already a major cause of hospital admission. Current estimates from the National AIDS Council Report for 2007 put the prevalence rate at just over 2% with over 80,000 people infected. There is also an epidemic of sexually transmitted diseases. Young women are particularly at risk and gender issues are major drivers of the epidemic. The national response has lagged behind the epidemic, particularly in rural areas, although the DoE's response stands out as one area of success. However, HIV/Aids remains a huge challenge for PNG and its development partners and the impact of the epidemic on the education system is expected to remain significant for the years to come.

1.6 Terminology

This plan is entirely consistent with the National Education Plan although slightly different terms have been used. In particular, the use of the term strategy is as much as possible limited to higher levels of policy making and planning rather than using it for lower levels of activity implementation. The table below shows the terminology used in the National Education Plan and compares this against what is being used in this document.

Table 3. Terminology NEP versus UBE Plan

National Education Plan 2005-2014	Universal Basic Education plan 2010-2019
An Outcome identifies in broad terms the planned destination or end points that the system aims to achieve	The Overall Objective identifies in broad terms the planned destination or end points that the system aims to achieve.
A Major outcome is the end point to be achieved at the end of this ten-year Plan	The Goal describes the end point to be achieved at the end of this ten-year Plan.
A Minor outcome is a point that has to be achieved on the way to accomplishing the major outcome	The Results describe the major effects that have to be achieved in order to achieve the Goal.
The Strategies describe the broad means of how the minor outcome will be achieved	The Outputs describe the products required to achieve the Results.
The Activities will collectively contribute to the successful implementation of the strategy.	The Activities describe what needs to be done to produce the required outputs.
	The Inputs describe the financial, human, and physical resources required to successfully implement the activities.
	Indicators measure (directly or indirectly) the achievements at each level. Standards need to be established in order to know to what extent the plan is on track. E.g. By the end of 2012, 95% of the 6 year old population has enrolled at Elementary Prep.
	Means of Verification are the sources of information (to be) used for the indicators

CHAPTER 2 SITUATIONAL ANALYSIS

This Chapter analyses the current situation regarding the provision of basic education in Papua New Guinea, and considers the reasons for the country not yet having achieved stated education goals.

2.1 Introduction

A review of the PNG Education Sector in 1991 initiated an education reform process. The rationale behind the education reform was to increase access for all children at the lower and upper secondary levels. The restructured education system aims to provide an education that is useful for life in the village. That is, it aims to prepare young people for formal and informal employment.

As a result of the restructure students are to receive nine years of basic education. This comprises three years of elementary education, initially taught in the language of the community, followed by six years of primary education. Grades 1 and 2 from the community schools will have been relocated to the elementary schools and grades 7 and 8 from the high school to a reorganised primary school structure catering for grades 3-8. Secondary schools will offer a four year education from grade 9 through to grade 12. The transition to the new system remains incomplete. Figures 3 and 4 show the old and the new basic education school structures.

Figure 3. The Old Education Structure

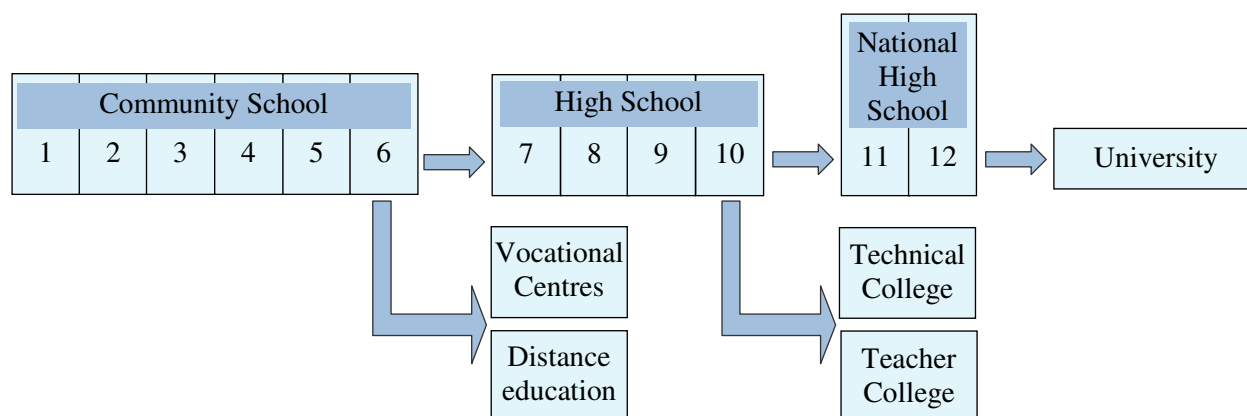
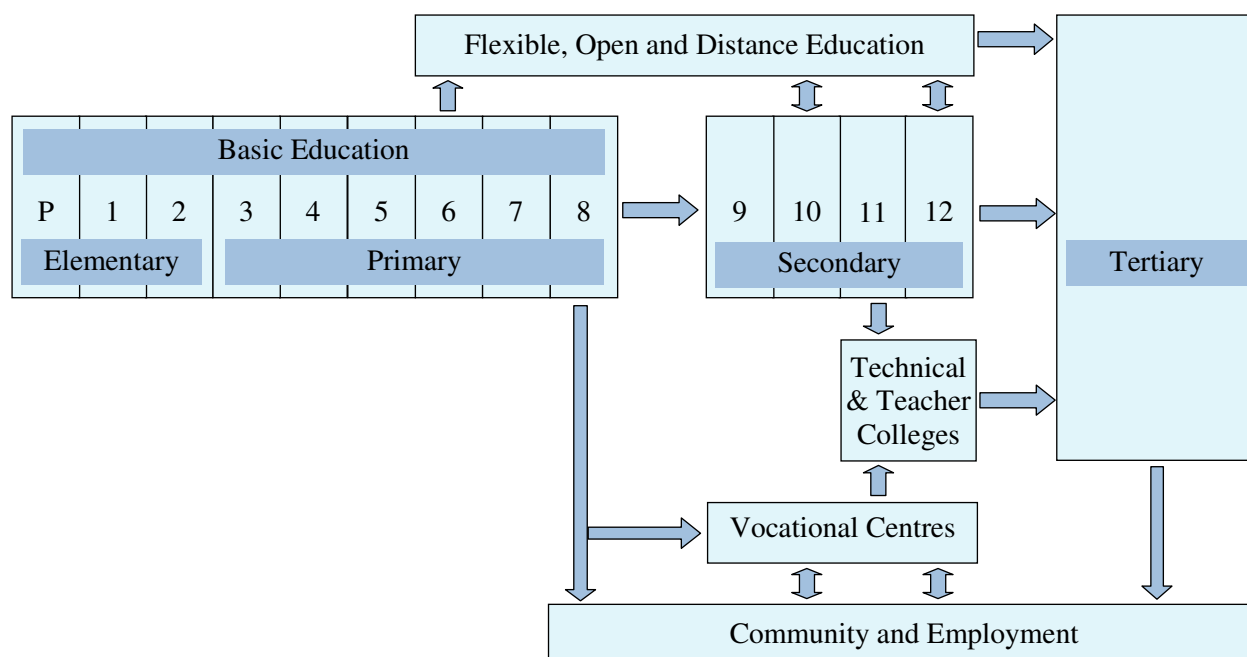


Figure 4. The New Education Structure



The church agencies continue to make a huge contribution to education in the country and in 2006 approximately 50% of both elementary schools and primary schools were administered by these churches as illustrated in table 4:

Table 4. Number of Schools and Enrolment by Administering Agency, 2006

Type of School	Government Agency		Church Agency	
	Number of Schools	Total Enrolment	Number of Schools	Total Enrolment
Elementary Schools	2,851	175,439	2,622	155,274
Primary Schools	1,629	324,189	1,726	318,920
Total	4,480	499,628	4,348	474,194

2.2 The Status of the Structural Reform of the Education System

This section looks at the success or progress otherwise that the country has made in restructuring the education system. The figures in table 5 are taken from initial data from the 2008 census which, it should be noted, does not include all schools. The table attempts to show the progress of the structural implementation of the education reforms. It suggests that the country has made better progress at adding Grade 7 and 8 classes to the primary schools than it has at establishing elementary schools. The second column shows, by province, the percentage of schools that still have Grade 1 classes. Nationally, approximately one in three schools still enrol these classes implying that in those areas there are no elementary schools established. Of particular concern are the provinces in the Momase and the Highlands regions which are the worst performing in terms of the structural reform. The final column shows the percentage of schools enrolling Grade 7 classes - almost two thirds of schools do so. Given that many primary schools take Grade 6 children from other schools in the same cluster, this suggests that a large percentage of children completing Grade 6 are given the opportunity to carry on in Grade 7 in a primary school.

Table 5. Progress of Structural Reform by Provinces, 2008

Province	No of Schools	No. with Grade 1 Class	No. with Grade 7 Class	%-age with Gr 1 Classes	%-age with Gr 7 Classes
Western	74	7	38	9	51
Gulf	72	14	34	19	47
National Capital	36	0	36	0	100
Central	172	29	100	17	58
Milne Bay	166	36	117	22	70
Oro	56	2	35	4	63
Southern Highlands	159	55	108	35	68
Eastern Highlands	222	125	107	56	48
Simbu	121	33	79	27	65
Western Highlands	160	84	87	53	54
Enga	118	51	67	43	57
Morobe	286	110	197	38	69
Madang	168	72	133	43	79
West Sepik	150	54	74	36	49
East Sepik	222	111	143	50	64
Manus	79	3	55	4	70
New Ireland	130	15	69	12	53
East New Britain	136	7	112	5	82
West New Britain	148	58	88	39	59
AR Bougainville	180	8	155	4	86
PNG	2,855	874	1,834	31	64

2.3 Availability of Data

Enrolment and staffing figures have long been collected on an annual basis and these have been used in PNG to track developments and monitor progress towards achieving UBE. Unfortunately these raw data are not sufficient for the needs of the Department in its monitoring and evaluation. The critical issue is that in the past the enrolment statistics have not been age-specific. This was remedied in 2007 when the data collected, for the first time, provided age-specific enrolment data by grade, by gender and by school.

Retention rates have also been calculated for monitoring purposes along with indices for monitoring the quality of learning.

2.4 The Key Indicators

Under the PNG definition of Universal Basic Education:

"All children of school age must enrol in school, complete nine years of basic education and should have learnt skills, knowledge and values covered in the basic education curriculum"

the key indicators used and what they measure are:

- i **Net Admission Ratio:** Number of 6-year olds enrolled in Elementary Prep as a percentage of the total population of 6-year olds.
- ii **Gross Admission Ratio:** Total number of new entrants in Elementary Prep, regardless of age, expressed as a percentage of the population at the official elementary school-entrance age.
- iii **Cohort Completion Ratio:** Percentage of Cohort that enrolled in Elementary Prep completing Primary Grade 8.
- iv **Net Enrolment Ratio:** Enrolment of the official age-group for a given level of education expressed as a percentage of the corresponding population.
- v **Gross Enrolment Ratio:** Total enrolment in a specific level of education, regardless of age, expressed as a percentage of the eligible official school-age population corresponding to the same level of education in a given school-year.
- vi **Quality of Learning:** The primary Grade 8 exam results have been used in the analysis for measuring the quality of learning in schools. These figures can really be best seen as being a proxy measure. Results from the Curriculum Standard Monitoring Test (CSMT) will be used in future years for this purpose.

The first two of these are measures of **access**. The third one is a measure of **retention**. These indicators combine to give the enrolment ratios. The final indicator is a measure of **quality**.

When UBE has been achieved there will be a 100% 6-year old Net Admission Ratio, a 100% Retention Ratio between all grades, and all of the children taking the curriculum monitoring tests will show that they have acquired, to an acceptable level, the skills, knowledge and values prescribed in the primary school curriculum. All of these indicators will be disaggregated by gender, province and district to allow for significant differences to be identified and acted upon.

2.5 Access

What are the historical trends

Admission rates

There is a number of ways of looking at admission rates especially given that age specific data is not available for the years prior to 2007.

Table 6 shows total enrolment in Grade 1 for the years 2000 through to 2007. These figures include children enrolled in both the elementary and primary schools. The third last column shows this figure as a percentage of the 7 year old population.

The second last column shows the Gross Admission Rate – the number enrolled in elementary prep as a percentage of the 6 year age group. This is the figure that will become increasingly more important as

greater percentages of children enrol in elementary schools as opposed to Grade 1 in the old community schools.

Table 6. Grade 1 Enrolment and Gross Admission Rates, 2000-2007

Year	Gr 1 Enrolment	7 year olds Population	Gr 1 Gross Admission Rate (%)	Gross Admission Rate (%)	Gender Parity Index
2000	146,137	145,123	100.7	41.0	0.92
2001	135,193	149,116	90.7	47.9	0.94
2002	148,920	153,224	97.2	62.4	0.92
2003	146,083	156,489	93.4	65.0	0.92
2004	147,436	160,774	91.7	67.2	0.95
2005	142,947	165,184	86.5	69.3	0.94
2006	152,263	170,435	89.3	74.7	0.96
2007	161,578	175,685	92.0	79.8	0.95

During this period 1,276,030 children passed the age of 7, and 1,180,557 children were recorded as being enrolled in Grade 1. This is a figure of 92.5% suggesting that rather less than 10% of children do not enrol in school at all. The gender parity index has improved over time but there is still a way to go before there is true gender parity.

Table 7 gives the number of children enrolling in school by type of school that they enrol in. This shows that the numbers enrolling in the elementary schools is rising year by year. The number enrolling in Grade 1 in the primary schools is reducing. The final column shows the number of new elementary prep classes formed each year given an assumption of 35 children per class. An average of 307 classes were established each year over this period. Of particular note is the very big rise in 2002. This was the year in which there was free education resulting in the demand for places being very high.

Table 7. School Entrants by Type of School, 2000-2007

Year	Elementary School Entrants	Primary School Entrants	No. of New Prep Classes	Gr 7 Primary Schools	Gr 7 High Schools	No. of New Gr7 Classes
2000	61,198	96,007	226	33,628	11,933	
2001	73,364	75,088	348	40,001	9,521	
2002	95,121	69,317	622	45,501	8,030	157
2003	101,719	53,843	189	52,910	5,124	212
2004	107,993	45,572	179	63,471	3,194	302
2005	114,442	53,396	184	67,715	3,260	121
2006	132,154	48,882	506	70,162	2,367	70
2007	139,224	53,557	202	75,405	1,473	150

Access to Grade 7 is also increasing as the upper primary classes are incrementally relocated from the high schools to the primary schools. The final column shows the number of new Grade 7 primary school classes formed each year given an assumption of 35 children per class.

What is the Current Status?

Admission rates

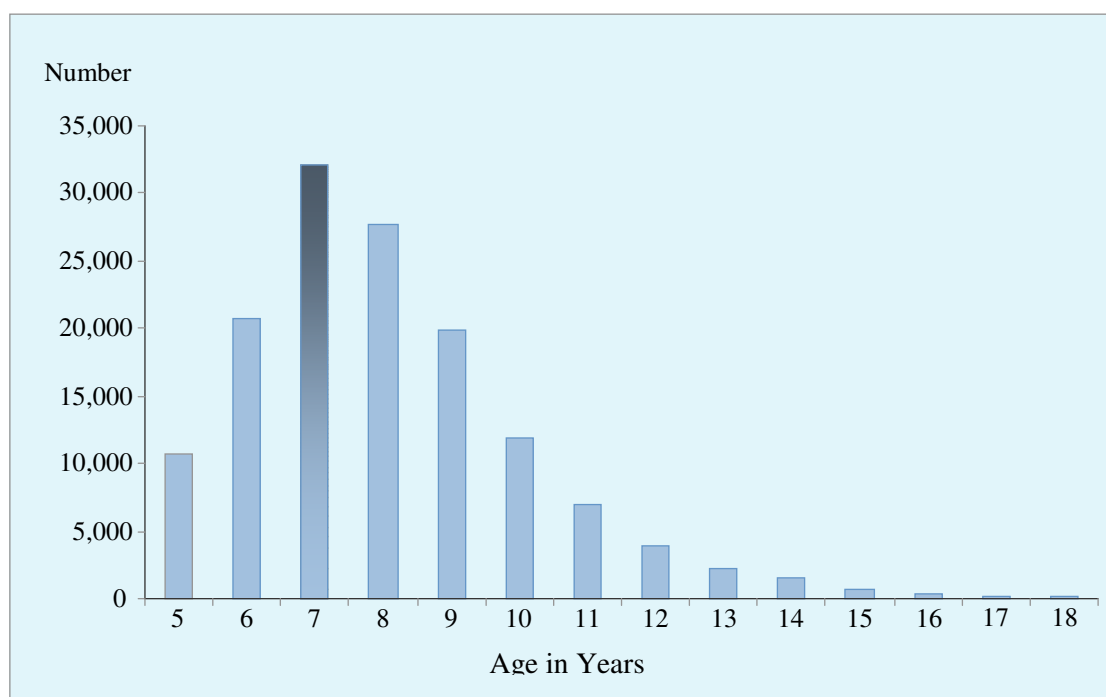
Table 8 and figure 5 show detail regarding the age structure of those admitted to elementary prep in 2007. The first four columns show the enrolments by age in elementary prep. The next column shows the percentage of each age in elementary prep – approximately 15% of children in elementary prep are 6 years of age, approximately 23% are seven years of age etc. This is the information shown in figure 5.

The final two columns show the population in each age group and the age specific admission rate – 11.8% of six year olds were enrolled in prep and 18.8% of seven year olds were enrolled.

Table 8. Elementary Prep Enrolment by Age, 2007

Age in Years	Enrolment			Age Group % age	Population	Age Specific Admission Rate (%)
	Boys	Girls	Totals			
5	5,430	5,273	10,702	7.7	180,431	5.9
6	10,484	10,169	20,661	14.9	175,685	11.8
7	16,344	15,754	32,084	23.1	171,078	18.8
8	14,723	12,985	27,712	19.9	166,108	16.7
9	10,542	9,297	19,850	14.3	161,801	12.3
10	6,420	5,466	11,867	8.5	156,853	7.6
11	3,851	3,201	7,046	5.1	153,165	4.6
12	2,274	1,726	3,992	2.9	148,797	2.7
13	1,302	993	2,290	1.6	144,790	1.6
14	862	648	1,506	1.1	140,880	1.1
15	340	273	609	0.4	137,077	0.4
16	206	177	381	0.3	133,375	0.3
17	138	102	237	0.2	129,774	0.2

Figure 5. Elementary Prep Age Structure, 2007



There is an enormous variation across provinces as shown in table 9. East Sepik Province has the lowest Net Admission Rate of 2.8% whilst Simbu has the highest with 30.5%. It is equally varied across districts within the same province.

Evidence would suggest that most, if not all, children who do not enter at the correct age of 6 years will enrol at some stage in the following years. The age range of children in a class may range over more than six years and this poses several problems.

First, for effective teaching and learning, it is desirable for children in a class to be at a similar developmental level. This makes it easier for teachers to prepare and deliver lessons appropriate for the majority of the children in a class. The textbooks developed for use in a particular grade assume that the children are of a particular age group and are structured at that particular level. In PNG class sizes can be large and this makes it even more difficult to cater for a wide range of children at different levels of aptitude and development.

Second, it is particularly important for girls to enrol at elementary prep when aged six. They are likely to remain in school longer if they do so. If girls enrol in elementary prep at age ten then by the time they

reach primary school in Grade 3 they will be 14 years of age. There is the danger that as girls mature during puberty they can be the target of adult males. Parents in rural areas are more likely to take them out of school for their protection and maybe even marry them off to suitors. If however, they enrol in elementary prep aged six, they will have completed primary school by the time they reach the age of 14.

Third, there is inadequate school capacity in some parts of the country, most usually in the urban areas.

A major challenge for this UBE Plan is to ensure that over the plan period the wide age range of those entering school will be reduced. It is planned that by 2012, all 6-year olds will be entering Elementary Prep although it is also recognised that there will still be some older children also enrolling.

Table 9. Net Admission Ratios by Province, 2007

Province	Net Admission Ratio			GPI
	M (%)	F (%)	T (%)	
Western	13.1	11.7	12.4	0.89
Gulf	5.6	5.3	5.5	0.95
National Capital	11.3	16.2	13.6	1.43
Central	14.2	16.2	15.1	1.14
Milne Bay	14.1	14.9	14.5	1.06
Oro	4.5	4.4	4.5	0.98
Southern Highlands	12.5	12.8	12.6	1.02
Eastern Highlands	10	9.9	9.9	0.99
Simbu	29	32.3	30.5	1.11
Western Highlands	18.9	18.5	18.7	0.98
Enga	15.9	13.4	14.8	0.84
Morobe	8.7	9.7	9.2	1.11
Madang	8.4	8.9	8.6	1.06
West Sepik	5.7	5.9	5.8	1.04
East Sepik	2.7	2.8	2.8	1.04
Manus	8.7	11.8	10.2	1.36
New Ireland	12.3	12.9	12.6	1.05
East New Britain	5.5	6.9	6.2	1.25
West New Britain	10.6	13.2	11.8	1.25
AR Bougainville	11	13.1	12	1.19
PNG	11.2	11.9	11.5	1.06

What are the Reasons for the low Admission Rate?

No Elementary School Available

The first reason is that there is no elementary school available within a reasonable distance. There are still communities in the country where the children enrol into the old system of community schools. These communities may have very little understanding of the necessity to establish elementary schools.

Inadequate Capacity

In the urban areas there is insufficient capacity at the elementary schools to admit all of the 6-year old children wanting to enrol. This means that in some places there is a growing backlog of children wanting to enrol as priority is given to the older children and the younger, 6 year old children, are requested to return the following year.

Financial Reasons

The affordability of school fees is a major problem for many parents who lead a subsistence lifestyle and have few opportunities for cash incomes. Parents may not be willing, or simply be unable, to send their children to school and to pay both the fees and the other related costs of education.

Even when elementary schools are available not all children are enrolling and this could be for a number of different reasons that may well be unique to a particular location. Local solutions will have to be developed for these local problems and the communities themselves are in the best position to be able to do so.

2.6 Retention

Retention is measured by the Cohort Completion Rate. This is the number of children who complete Grade 8 as a percentage of those who entered the Elementary Prep grade.

The structural reform of the system is on-going in that not all children enter school at prep and there are still some schools where children are not able to progress automatically from Grade 6 to Grade 7. It is for this reason that the retention rate between grades 1 to 6 is still used and will continue to be used for monitoring purposes until such time that all children entered at prep and have the opportunity of completing Grade 8.

Retention can also be measured and monitored by using Intra Grade Retention Rates. This is the percentage of the children of a grade retained from the previous years' enrolment of the preceding grade.

What are the historical trends?

The most recent figures for Grade 1 to 6 retention are shown in table 10.

Table 10. Grade 1 to 6 Retention Rates by Gender for Cohorts, 1995-2001

Period	M (%)	F (%)	T (%)	GPI
1995-2000	58.5	55.4	57.1	0.95
1996-2001	57.0	54.8	56.0	0.96
1997-2002	58.3	54.1	56.4	0.93
1998-2003	53.2	50.4	51.9	0.95
1999-2004	56.2	53.4	54.9	0.95
2000-2005	61.9	59.1	60.6	0.95
2001-2006	67.9	62.1	65.2	0.91

The figures show that there has been little significant improvement in the retention rate over recent years.

What is the Current Status?

Table 11 presents the data by province and gender for the cohort that were in Grade 1 in 2002. This shows that 62% completed Grade 6 in 2007.

Table 11. Grade 1 to 6 Completion Rates by Province and Gender for Cohort Completing, 2007

Province	M (%)	F (%)	T (%)	GPI
Western	93.4	89.6	91.6	0.96
Gulf	75.9	65.9	71.3	0.87
National Capital	94.8	87.7	91.4	0.93
Central	104.2	96.7	100.7	0.93
Milne Bay	86.2	94.2	90.1	1.09
Oro	55.6	51.2	53.6	0.92
Southern Highlands	45.0	37.7	41.9	0.84
Eastern Highlands	53.8	42.9	48.8	0.80
Chimbu	43.0	40.2	41.8	0.93
Western Highlands	56.6	48.1	52.6	0.85
Enga	34.0	22.9	28.9	0.67
Morobe	83.2	73.2	78.6	0.88
Madang	63.0	54.7	59.2	0.87
West Sepik	54.4	45.8	50.4	0.84
East Sepik	71.7	71.6	71.6	1.00
Manus	71.1	65.4	68.4	0.92
New Ireland	94.8	99.4	96.9	1.05
East New Britain	128.8	121.0	124.9	0.94
West New Britain	60.3	60.0	60.1	1.00
AR Bougainville	82.8	80.7	81.7	0.97
Kiunga Lake Murray	75.3	78.3	76.6	1.04
PNG	64.3	58.9	61.8	0.92

These figures are consistent with those from previous years. There is a huge variation between the provinces with two provinces having rates greater than 100%. The reason for this is probably related to errors in data collection but it does suggest that the actual rate may be even lower.

The retention rate is mostly used at the system level but can be equally valuable at the school and District Level. The monthly reports that are submitted from schools can be used to monitor the numbers dropping out of school throughout the year. School Learning Improvement Plans (SLIP) will put in steps to address retention issues at school level.

What are the reasons for the poor retention rate?

Children drop out of school for a variety of reasons. Some of these are common across the country whilst others are unique to particular provinces or districts.

The reasons for children dropping out of school can, for the purpose of this analysis, be placed in two categories: *In-School Factors* and *Out-of-School Factors*. The *In-School Factors* are those that are linked to school and education system policy and practices whilst *Out-Of-School* factors are those linked to parents and the community.

In-School Factors

- ***School Fees***

Research reports, as well as anecdotal evidence, indicate that school fees are a major contributing factor to children dropping out of school. This will continue to be the case until such time that financial barriers to children attending school can be removed.

- ***Lack of Educational Materials***

Inadequate supply of teaching and learning materials, including text books, exercise books and even writing tools also contribute to a poor learning environment causing children to lose interest in schooling and, ultimately, dropping out.

- ***Lack of Adequate School Infrastructure (classrooms, teachers' houses water and sanitation)***

Many schools have neither adequate weatherproof classrooms nor sufficient desks to accommodate the pupils. Water and sanitation is an enormous issue in schools. Many are unable to provide safe drinking water. The lack of a sufficient number of toilets, or toilets providing insufficient privacy, can contribute to children, especially girls, dropping out of school.

Though not affecting the pupils directly, the lack of adequate accommodation for school staff impacts on the quality of the teaching as it affects teacher morale.

- ***Poor Teacher Attitude and Attendance***

Time on task is a critical determinant of the quality of education and it is reported that teachers are frequently absent from classes or are very late to attend. In many rural schools teachers may not be at schools for two to three days of a school week and in the case of many remote schools, for several weeks at a time. In most cases teachers leave school to attend to many administrative matters that have not been sorted out at district or provincial level.

- ***Remoteness***

Recent studies have shown that teachers are reluctant to go to remote areas. This is despite Government recognising their hardships by awarding a number of allowances for teachers prepared to work in remote schools. There are other factors such as poor housing, poor teaching facilities and the lack of personal development opportunities play an important role.

The end result is that the children within the remote areas either do not enrol and even if they do, they drop-out more frequently due to the lack of quality education.

- ***Negative Pupil Behaviours***

Peer group pressures are associated with many forms of negative pupil behaviour. Many schools are faced with the dilemma of whether to counsel or terminate pupils who are involved in some form of negative behaviours. The latest Curriculum Standards and Monitoring Test results have shown that

bullying is prevalent in many of our schools. Teachers and parents are important support structures for pupils but many do not fully appreciate their roles and responsibilities are.

Out of School Factors

- ***Lack of Parental Support and Community Responsibility towards the Education of Children***
 Highlighted in the retention study (2001) is the "lack of parental support" to pupils attending schools. Parental knowledge of the advantages of education and the need for parental support are important determinants for the maintenance of children throughout the school system.

The New Guinea Islands and the Papuan regions, where a greater percentage of parents have had some level of education themselves, appear to provide a higher level of support for their children's education. This is reflected by the higher admission and retention rates.
- ***The Relevance of Schooling***
 In the sixties and seventies, the intrinsic motivation for schooling for both parents and their children was the belief that a (government) job would be secured following completion of their education.

This is no longer the case. Many children are unable to even gain a place in Grade 9 let alone Grades 11 and 12 and if they do complete a further education, the number of job opportunities is not expanding. This issue is way beyond the scope of this Plan or of the education system itself. Nonetheless, this present employment situation has an impact on pupils' attitudes and serves to limit the perceived value of basic education.
- ***Tribal Fights***
 Tribal fights that occur most frequently in the highlands provinces affect children's schooling. Schools inevitably close down for periods even if there is no actual physical damage to the school and, equally inevitably, when they reopen a few children will not re enrol.

2.7 Enrolment Rates

The Enrolment Rate measures the percentage of school aged children who are enrolled in school. It reflects the combined effects of access and of retention. If both of these increase then the enrolment rate will also increase. The Gross Enrolment Ratio has always been used in the past because the actual ages of children enrolled in school were not known.

What are the historical trends?

Table 12 presents Gross Enrolment Ratios for the years 2000 to 2006.

Table 12. Gross Enrolments Ratios by year, 2000-2006

Year	Gr 1-6 (%)	GP to 8 (%)	Gr 3-8 (%)
2000	79.3	63.6	55.1
2001	73.3	61.1	53.7
2002	76.0	65.6	55.7
2003	77.2	67.6	58.0
2004	78.5	70.2	61.3
2005	79.8	71.5	63.1
2006	78.3	71.4	62.8

What is the Current Status?

The 2007 school census collected data of actual age of children in school. The net enrolment or the actual age of children enrolled can be used as a percentage of the school aged population to indicate the percentage of school aged children in school and the percentage, out of school. This is known as the Net Enrolment Ratio and will be used for the monitoring of the plan implementation.

A wide gap between Net Enrolment Ratio and Gross Enrolment Ratio is an indicator of very low internal efficiency.

Table 13 presents both the Net Enrolment Ratio and Gross Enrolment Ratio measures are used for Grades 1 to 6, and from Prep to Grade 8. Table 14 shows the Gender Parity Indices for each of these measures and illustrating the enormous variation between provinces.

Table 13. Net and Gross Enrolment Ratios by Province, 2007

Province	Gr 1-6 NER			Gr 1-6 GER			Prep-Gr 8 NER			Prep-Gr 8 GER		
	M (%)	F (%)	T (%)	M (%)	F (%)	T (%)	M (%)	F (%)	T (%)	M (%)	F (%)	T (%)
Western	49.2	48.6	48.9	62.5	60.7	61.6	61.0	60.1	60.6	76.8	74.1	75.5
Gulf	36.3	35.9	36.2	63.8	54.4	59.2	43.0	40.5	41.8	61.1	53.8	57.6
National Capital	54.6	57.0	55.7	76.1	75.2	75.7	65.3	67.6	66.4	75.6	75.3	75.5
Central	50.0	48.7	49.4	81.0	75.3	78.3	59.2	57.3	58.3	83.5	71.3	77.8
Milne Bay	59.1	60.6	59.8	87.8	90.4	89.0	67.8	70.8	69.2	82.7	86.7	84.6
Oro	23.0	24.3	23.6	65.7	62.8	64.4	37.6	39.2	38.4	61.4	58.8	60.2
Southern Highlands	37.3	32.7	35.1	61.3	49.4	55.6	42.7	36.9	39.9	56.9	46.0	51.7
Eastern Highlands	49.5	46.3	48.0	75.7	66.4	71.3	52.0	47.9	50.1	65.8	57.1	61.7
Simbu	59.0	54.9	57.1	80.0	71.9	76.1	62.2	57.5	60.0	75.0	67.4	71.4
Western Highlands	58.6	54.0	56.4	84.0	73.2	78.9	57.6	52.7	55.2	75.4	66.2	71.0
Enga	50.7	41.2	46.3	78.7	59.3	69.7	56.0	45.9	51.3	71.6	56.0	64.3
Morobe	42.7	40.3	41.5	80.5	70.3	75.6	51.9	48.1	50.0	72.6	63.0	68.0
Madang	31.2	30.3	30.8	69.3	62.2	65.9	45.6	44.3	45.0	66.8	60.8	63.9
West Sepik	32.9	30.7	31.9	73.4	61.2	67.5	41.5	38.0	39.8	63.2	52.3	57.9
East Sepik	42.6	39.8	41.3	89.9	79.2	84.7	52.1	48.8	50.5	78.1	69.3	73.8
Manus	54.4	58.5	56.4	82.5	82.1	82.3	64.9	67.7	66.2	83.0	83.0	83.0
New Ireland	48.1	49.2	48.7	79.9	79.5	79.7	61.9	63.0	62.4	78.2	79.0	78.5
East New Britain	49.5	48.9	49.2	90.1	86.5	88.4	67.6	65.6	66.6	88.6	86.0	87.3
West New Britain	47.6	46.0	46.8	85.6	79.5	82.7	61.2	59.7	60.5	81.1	76.1	78.7
AR Bougainville	44.5	48.3	46.3	106.9	109.7	108.2	66.5	70.5	68.4	108.8	110.2	109.5
Kiunga Lake Murray	54.5	50.5	52.5	95.8	84.1	90.1	68.2	63.7	66.0	95.7	82.1	89.1
PNG	45.7	43.4	44.6	78.2	70.2	74.4	54.3	51.4	52.9	73.3	66.1	69.8

Table 14. Gender Parity Indices for Net and Gross Enrolment Rates by Province, 2007

Province	G1 to 6 NER	G1 to 6 GER	P to G8 NER	P to G8 GER
Western	0.99	0.97	0.99	0.96
Gulf	0.99	0.85	0.94	0.88
National Capital	1.04	0.99	1.04	1.00
Central	0.97	0.93	0.97	0.85
Milne Bay	1.03	1.03	1.04	1.05
Oro	1.06	0.96	1.04	0.96
Southern Highlands	0.88	0.81	0.86	0.81
Eastern Highlands	0.94	0.88	0.92	0.87
Simbu	0.93	0.90	0.92	0.90
Western Highlands	0.92	0.87	0.91	0.88
Enga	0.81	0.75	0.82	0.78
Morobe	0.94	0.87	0.93	0.87
Madang	0.97	0.90	0.97	0.91
West Sepik	0.93	0.83	0.92	0.83
East Sepik	0.93	0.88	0.94	0.89
Manus	1.08	1.00	1.04	1.00
New Ireland	1.02	0.99	1.02	1.01
East New Britain	0.99	0.96	0.97	0.97
West New Britain	0.97	0.93	0.98	0.94
AR Bougainville	1.09	1.03	1.06	1.01
Kiunga Lake Murray	0.93	0.88	0.93	0.86
PNG	0.95	0.90	0.95	0.90

The Net Enrolment Ratio expressed as a percentage at times may not indicate the severity of the problem in numbers of children out of school. Table 15 sets out, by province, the numbers of 6 to 14 year aged children in school and out of school in 2007.

Table 15. Numbers of School-aged Children In- and Out of School, 2007

Province	In School			Out of School		
	M	F	T	M	F	T
Western	9,807	9,171	18,978	6,265	6,082	12,347
Gulf	7,622	6,518	14,140	9,252	8,862	18,114
National Capital	21,511	20,052	41,563	11,442	9,600	21,042
Central	19,289	14,611	33,900	8,795	10,301	19,096
Milne Bay	20,423	19,411	39,833	9,706	8,004	17,710
Oro	7,784	7,354	15,138	12,919	11,391	24,310
Southern Highlands	35,571	28,169	63,741	47,319	47,912	95,231
Eastern Highlands	33,959	27,809	61,766	31,285	30,226	61,514
Simbu	21,451	17,760	40,311	12,710	12,662	24,271
Western Highlands	38,219	31,544	69,762	22,725	23,676	46,401
Enga	23,612	16,960	40,571	18,541	20,028	38,570
Morobe	40,272	34,490	74,744	37,387	37,262	74,667
Madang	27,263	23,763	51,025	30,551	28,238	58,791
West Sepik	11,726	9,876	21,586	16,503	16,134	32,655
East Sepik	26,499	23,248	49,746	24,327	24,408	48,736
Manus	4,271	3,953	8,225	2,307	1,888	4,195
New Ireland	11,223	10,466	21,689	6,917	6,137	13,054
East New Britain	18,032	15,947	33,979	13,884	13,787	27,671
West New Britain	21,560	19,496	41,055	7,922	7,213	15,135
AR Bougainville	16,821	16,120	32,941	8,482	6,733	15,215
Kiunga Lake Murray	5,221	4,625	9,846	2,624	2,820	5,444
PNG	422,136	361,344	784,539	341,864	333,364	674,169

2.8 Quality of Learning

In order to achieve true UBE it is not enough for all children to enrol in school and to complete the nine years of basic education. It must also be demonstrated that these children have acquired the knowledge, skills and values as is clearly outlined in the curriculum.

A new Outcome Based Curriculum (OBC) was introduced in 2005 that sets out clear learning outcomes for all subject areas by grade. Teachers are given the opportunity to organize their learning activities to achieve the prescribed learning outcomes. This curriculum requires a different, and more interactive, way of teaching though and not all teachers have yet acquired the skills and knowledge required.

The quality of learning will, ultimately, be measured using a Curriculum Standard Monitoring Test. This has been successfully piloted for two years and the DoE has introduced the test nationwide at Grades 5 and 7, the first of which were conducted in December 2008.

The results of these tests will be presented and then interpreted by schools and districts to identify areas that impact on the quality of learning and take appropriate corrective measures.

What is the Current Status?

The 2006 Grade 8 Certificate Of Basic Education exam results were used as a proxy to measure quality of learning at the time. This examination tested the common knowledge and skills in both existing examination specifications and also the outcomes derived from the reformed curriculum. This was done because not all schools at that time had implemented the Outcomes Based Curriculum.

The 2006 Grade 8 examinations results are presented by a 20% sample elicited from the Students Information Sheets returned by the Provinces. Table 16 shows the 2006 Grade 8 students' performance in Literacy, Numeracy, General Skills and Written Expression. The marks shown are the provincial means out of 50 marks for all the first three subjects, whilst written expression is out of 20 marks. Except for Written expression, the results are well below 40%, which raises the questions whether the curriculum has

been well taught or whether the test is in line with the curriculum. Strangely enough the Written Expression score is relatively high at almost 70%, which appears at odds with the Literacy results.

Table 16. Student Performance Grade 8, 2006

Province	Numeracy	Literacy	General	Written
Scale	1-50	1-50	1-50	1-20
Western	14.8	16.0	15.5	11.3
Gulf	11.8	15.0	13.5	9.2
National Capital	21.6	24.4	23.7	15.7
Central	15.5	18.2	16.6	11.9
Milne Bay	15.6	18.7	17.0	12.1
Oro	16.4	19.5	18.6	14.9
Southern Highlands	22.1	18.4	20.3	12.3
Eastern Highlands	23.7	23.1	24.1	16.2
Simbu	23.2	21.5	22.5	16.4
Western Highlands	26.1	22.7	24.0	16.1
Enga	25.6	21.0	22.4	14.3
Morobe	(n/a)			
Madang	18.8	18.7	20.4	14.5
West Sepik	21.5	20.7	20.5	11.2
East Sepik	16.9	16.4	18.1	11.1
Manus	21.2	21.1	24.1	15.2
New Ireland	17.1	19.4	19.8	14.5
East New Britain	18.5	20.3	20.3	15.1
West New Britain	(n/a)			
AR Bougainville	16.9	18.1	17.1	12.6
PNG	19.3	19.6	19.9	13.6

All highlands provinces performed above average in all subjects but the highlands region also has a low retention rate so it could be that only the brighter ones stay on and complete the primary school cycle whilst the weak ones had dropped out.

Within provinces, there is wide variation between districts with some of the remote districts having very low marks. This is also the case when the provincial average might be well above the national mean.

What are the Reasons for the Poor Quality Of Learning?

There are often disagreements on what is meant by the quality of learning and how this can be measured. This can also determine what strategies are adopted to improve quality of learning.

One way to look at quality is to assess various inputs to the learning process such as the quality of teachers and the quality of school and classroom facilities. All of these factors can be important and influence learning outcomes.

Inadequate attention and emphasis is often given to process factors such as how learning activities are organized, how much time is given to learning activities, whether teachers teach pupils to memorise material or engage them in interesting and practical learning experiences such as promoted under the Outcomes Based Curriculum.

As resources are scarce, many education researchers and policy planners have argued about the relative weight of each of them and what interventions need to be taken. These can be biased, using personal experiences and the results of just one or two research studies to push particular interests. System level interventions may have minimal impact at the classroom level.

In PNG, there has been little research to identify the factors that impact on quality so there is a need to seek international experiences. Fuller and Clark (1994) in a meta analysis of many studies undertaken in different countries identified three common factors that indicated consistent relationships of school level inputs that impact on pupil learning. These are:

- Availability of textbooks and supplementary reading materials
- Teacher quality
- Instructional time and the work demand placed on pupils

These common factors also strike a cord for PNG and are key areas of concern. There has always been a concern at schools and classroom level about the non-availability of textbooks and other reading materials. The quality of teachers has also been a concern. More so, there is increasing concern about teachers not being at schools to teach resulting in loss of learning time. Students skipping classes can also result in loss of learning time. These factors all contribute to poor learning in PNG schools and need to be addressed.

They also point out that the evidence is inconsistent for class sizes and teacher salaries, areas that come up as policy choices for improving teaching and learning in many developing countries. Past plans and programmes to address quality of learning in PNG have been taken at the system level. These have included the introduction of vernacular languages in the early years of schooling, adjustments to the school curriculum to make it contextually relevant, the writing, and the production and supply of textbooks.

First and foremost, it must be recognized that the learning inputs must be introduced effectively at the classroom and school level. Too often in the past interventions have been funded and undertaken at the national level with little understanding as to how they might impact on performance in the classroom.

2.9 Education Management

What is the Current Status?

Under the Education Act, the administration and management of the National Education System is vested in the Minister and Education Secretary at the national level and in provincial governments, district administrations, local-level governments and education agencies at the sub-national levels.

There are significant challenges in the management of education in Papua New Guinea. These range from financial management at the school level through to concerns regarding the capacity of provinces and districts to plan effectively for the expansion and development of the education system.

The DoE is responsible for determining national policies, coordinating national policy implementation, maintaining national standards, and providing professional support and advisory services for planning, research, training and staff development. It is also responsible for operating the national institutions including teachers' colleges, technical colleges, national high schools, special education resource centres, the College of Distance Education and all schools in the National Capital District.

The education system operates in a highly decentralised context whereby, under the Organic Law on Provincial Governments and Local Level Governments, provinces, districts and local level governments have responsibilities for provision of education. The Organic Law refers to "General Education" being all forms of education up to Grade 12. This includes pre-school, elementary, primary, high, secondary and vocational education.

The Organic Law has had considerable implications for the education sector. It represents a major effort by the national government to redirect the focus of government towards districts and local communities. This underlies provision of services by all government departments, non-state education providers and donor agencies.

The Organic Law determines the legal context, and the nature and scope of the powers, roles and responsibilities of the national Minister, the DoE and other national bodies such as the National Education Board, the Teaching Service Commission and the Office for Higher Education. It also determines the nature and scope of the powers, roles and responsibilities of provincial and local-level governments, and districts administrations. Schools receive funding and support from multiple channels: national, provincial, district and Local Level Government (LLG) levels, as well as from the private sector and the community through school fees.

Consistent with the intent of the law, important amendments were made in 1995 to the Education Act and the Teaching Service Act.

- The relevant amendment to the Education Act makes provisions for the establishment of District Education Administrator (DEA) positions.

- The relevant amendment to the Teaching Services Act vest disciplinary authority over teachers within a province in the Provincial Administrator.

This legislative framework clearly makes provincial and local level governments responsible for developing and operating the schools in each province. Table 17 maps the main responsibilities in the education sector by level of government. These have been adapted from the National Economic and Fiscal Commission, 2005, *Responsibilities Specification Matrix Education Sector*.

The bulk of the infrastructure development is carried out at the provincial level and a process has been developed to facilitate this. A Provincial Project Implementation Team, which is a sub-committee of the Provincial Education Board (PEB), has been established in nearly all of the provinces and is made up of the PEA who chairs the Team, and other stakeholders such as the churches and technical officials.

Table 17. Responsibilities in the PNG Education Sector by Level of Government

ACTIVITY	NATIONAL GOVERNMENT	PROVINCIAL GOVERNMENT	LOCAL LEVEL GOVERNMENT
Policy & Planning	<ul style="list-style-type: none"> • National Education Board and Teaching Services Commission • Develop curriculum 	<ul style="list-style-type: none"> • Develop Provincial Education Plan 	<ul style="list-style-type: none"> • Identify local priorities
Elementary education	<ul style="list-style-type: none"> • Set maximum school fee limits • Pay school fees subsidy in 1st and 3rd quarter • Curriculum development (some locally based curriculum developed at community/school level) • Deliver new curriculum materials to Provincial Government HQ • Pre-service teacher training and registration 	<ul style="list-style-type: none"> • Decide to recognise new schools • Provide support through the Education Function Grant • Distribute curriculum in province and acquire additional education materials • Assist with logistics of teacher training (eg, venues, transport) 	<ul style="list-style-type: none"> • Assist in securing land for new schools and community with construction • Maintain schools; inspect buildings that are LLG funded
Primary education	<ul style="list-style-type: none"> • Curriculum development and delivery to Provincial Government HQ • Pay school fees subsidy in 1st and 3rd quarter • Provide Grade 8 exams to Provincial Government and collate results across PNG • Teacher training and in-service training • Inspect schools 	<ul style="list-style-type: none"> • Store, then distribute curriculum throughout province • Provide support through the Education Function Grant • Administer Grade 8 exams and send results to DoE • Compile district monthly reports and submit quarterly to DoE • Logistical support for school inspections • Payroll administration (in some provinces) 	<ul style="list-style-type: none"> • Construction and maintenance of primary schools • Maintain schools; inspect buildings that are LLG funded
Secondary and Vocational	<ul style="list-style-type: none"> • Run the National High Schools • Grade 9 and 11 selection criteria • Grade 10 and 12 exams prepared and delivered to Provincial headquarters; marking exams • Granting of school certificate and higher school certificate • Develop curriculum and deliver to Provincial headquarters • Teacher training (vocational), admission and registration • Inspections 	<ul style="list-style-type: none"> • Run and maintain Provincial High Schools • Distribution of grade 10 and 12 exams and supervision • Compile district monthly reports and submit quarterly • Prepare storage plan and distribute curriculum to schools • Determines applications for in service training, organise venues and logistics (also District involvement) • Payroll administration • Some school inspections and logistic support for National inspections 	

2.10 Equity Issues

The lack of equity is a cross-cutting concern related to access, retention, and quality of education. More specific equity issues are discussed below.

Gender

In 2003 the DoE developed a Gender Equity in Education Policy and a strategy paper has since been formulated to implement this policy. This policy provides a framework of principles and practices to improve the lives of all children and promotes gender equity between girls and boys. The intention of this policy is to improve the status of women and to contribute to raising the quality of the labour force.

Girl's participation at the lower levels of the education system are still relatively good as is shown by the gender parity index for net admission which is 1.07. However, it has been noted that there are still more boys than girls being educated at every level of education, although not necessarily in all provinces, and that drop-out rates for girls are higher than for boys. Cultural factors as well as economic choices have been the main causes for lower number of girls attending schools throughout the country. There is a problem of loss in the system of female pupils, particularly in the higher grades. Boys and girls will be given the same chance to successfully complete their basic education.

Failure to educate girls is a missed opportunity for all. Education is vital to the future prospects and development of both boys and girls. Education is the foundation on which future employment prospects and opportunities are built. For those who grow up in rural areas, education offers the chance to make more of the resources available to them. For girls in particular, schooling offers the chance of independence. Girls who are educated are less likely to be exploited and less likely to be infected with HIV. Girls' education also creates a virtuous and self-propelling cycle. Women who are educated are more likely to have healthy children of their own. Data show a striking correlation between under-5 mortality rates and the educational attainment of mothers.

Female participation in decision making is poor throughout the system. Efforts have been made to improve the situation at the Board of Management (BoM) level and these efforts will be continued and extended. There has only ever been one female Provincial Education Adviser (PEA), although a further officer has acted in such a position, and there are very few District Education Administrators (DEA). The situation within the Department of Education regarding female participation in decision making has changed little and compares poorly with other line Departments.

HIV/Aids

The education sector has a vital role to play in responding to the epidemic and reducing risks for young people and their teachers. It also has a role to play in reducing stigma and discrimination and mobilising young people in the fight against HIV/Aids. DoE developed an HIV/Aids Policy in 2005 and is now implementing this through an HIV/Aids/Sexually Transmitted Disease Implementation Plan. DoE has completed incorporating HIV/Aids in the curriculum from Grade 5-12 and has integrated HIV/Aids and reproductive health in pre-service teacher training as well as vocational education teacher training. HIV/Aids is a core component of the School Learning improvement Plans and teacher in-service plan. However, the challenges facing DoE include: staffing the response, coordinating activities and partners and monitoring the impact of HIV on the workforce and students. HIV/AIDS must be a priority function for the Department for the foreseeable future. It is also clear from international experience that UBE significantly reduces the risk of being infected with HIV and is crucial in the national response to the epidemic.

Special Needs Education

There is a substantial number of PNG children that are physically or mentally handicapped, and who do not have access or do not get the attention they require to be educated to the best of their capacity. At present, there are only few special needs educational facilities in the country. UBE is there for all and special provisions need to be made for those children who cannot take part in the regular schooling system. There currently exists a DoE endorsed (by the national Education Board in 2003) Policy and Guideline for Special Education covering a broad range of areas. This is due to be reviewed in the near future. There is a number of areas that need to be strengthened including Curriculum, Instructional

Strategies and Materials, Teacher Preparation, the Role of Special Education Centres, Linkages and Collaboration, Parent Education and Community Involvement and Monitoring of the Progress of Special Education and Funding.

A Special Education course is being offered at all Teachers Colleges, including the PNG Education Institute. The current course offered is being reviewed by special education lecturers, and for which a first workshop was held in 2008. The national Special Education Unit within DoE's Teacher Education Division is working towards having another workshop to compile the final draft for presentation to the national Teacher Education Board of Studies.

Generally, the Special Education programmes need to be strengthened at all Teachers' Colleges. This means that Special Education lecturers require further professional development to enhance their current qualifications and experiences on Special Education. At the same time, they need to be well resourced with appropriate and adequate teaching materials and equipment.

Divine Word University offers a B.Ed. Special Education course through distance mode. The course is facilitated by Callan Studies, a branch of Callan National Unit. This Agency works in very close consultation with the Department through the Inclusive Education Unit. The University of Goroka offers a Special Education course under the B.Ed. in-service programme and a B.Ed. Inclusive Education course for pre-service students for secondary teaching.

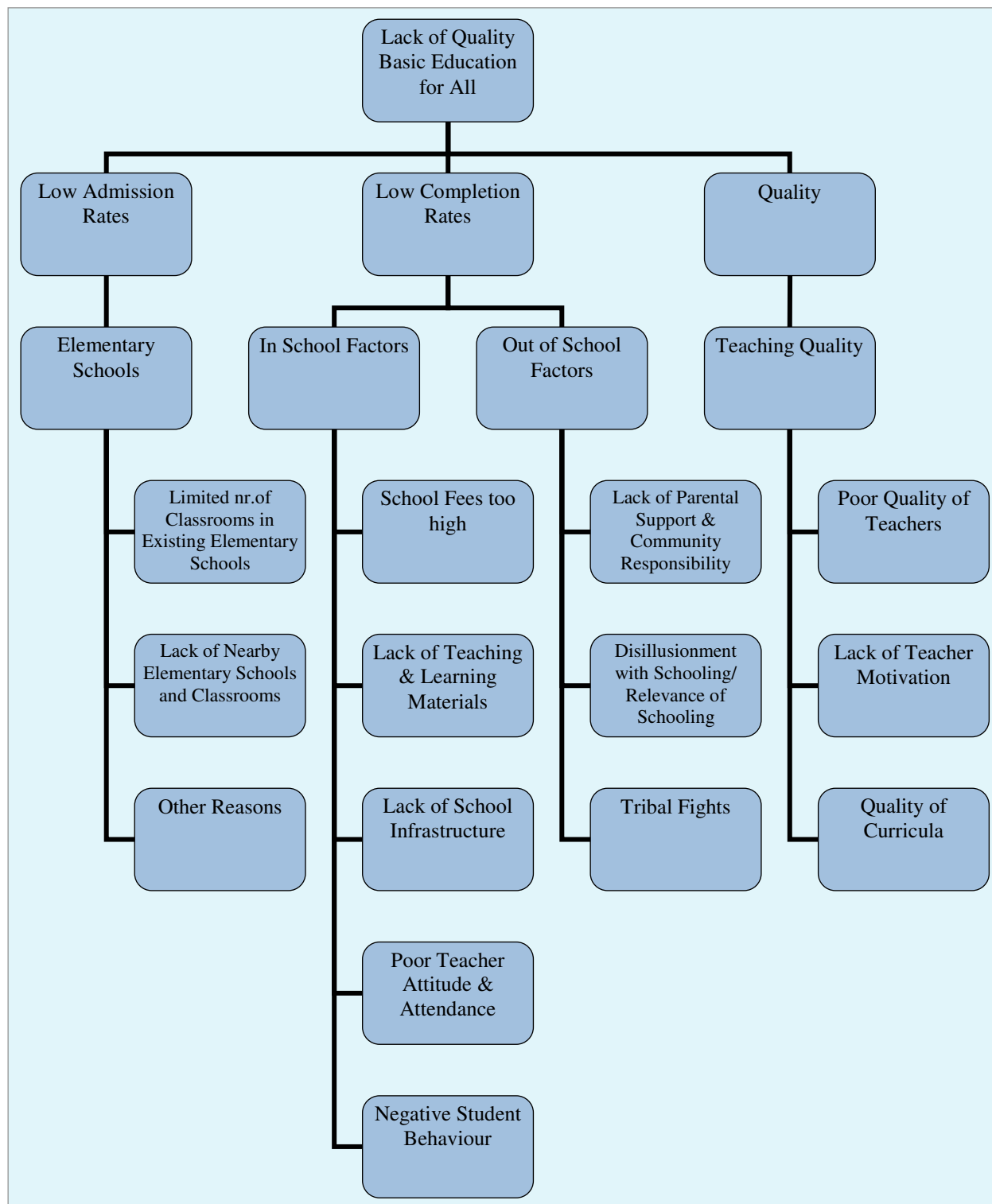
There are currently 3 staff in charge of the National Special Education unit at DoE's Teachers Education Division. The unit needs further strengthening by at least 3 more staff (a professional assistant and additional inspector).

The Most Vulnerable Children

It is acknowledged by the Department of Education that there are multiple and complex barriers for access and retention of children who experience- and are vulnerable to extreme poverty, homelessness, illness, violence, abuse, exploitation, neglect, and conflict. If the goal of basic education for all is to be realised, the 'most vulnerable children' will require additional protection and support beyond payment of school fees so that they can enrol and stay in school. In the context of the HIV epidemic, education plays a significant role in responding to the increase in numbers of vulnerable children as education offers a chance for these children to break the cycles of poverty and abuse.

Figure 6 gives an overview of the constraints and challenges as described in this situational analysis chapter and how they relate to the overall lack of basic quality education for all.

Figure 6. Overview Status PNG Universal Basic Education



CROSS - CUTTING CONSTRAINTS

Lack of Equity

- Gender
- HIV/Aids
- Special Needs Education
- Adult Education

Limited Basic Education Management Capacity

- Headteachers and Site Leaders
- District Education Administrators
- School Inspectorate
- Provincial and National Education Authorities

CHAPTER 3 THE UBE GOAL - RESPONSE TO SITUATION

The pressing issues identified in Chapter 2 determined the UBE vision, mission and goal. Four specific results have been identified that are fundamental to providing Universal Basic Education in Papua New Guinea.

3.1 Vision

The vision for education is to provide all citizens equal access to quality basic education, which provides them with life long skills to contribute to the long term sustainable development of PNG.

The National Education Plan (2005-2014) specifically mentions:

- At 6 years of age all children begin their basic education in an elementary school in a language that they speak. For the next three years they develop the basis for sound literacy and numeracy skills, family and community values including discipline, personal health care, and respect for others;
- At 9 years of age children continue their basic education in a primary school. After six years of primary education that begins with a bilingual programme, children have the skills to live happily and productively, contribute to their traditional communities and use English to understand basic social, scientific, technological, and personal concepts and value learning after Grade 8.

3.2 Mission

The Department of Education's mission, as defined by the National Executive Council, and as mentioned in the National Education Plan is fivefold:

- to facilitate and promote the integral development of every individual;
- to develop and encourage an education system which satisfies the requirements of Papua New Guinea and its people;
- to establish, preserve and improve standards of education throughout Papua New Guinea;
- to make the benefits of such education available as widely as possible to all of the people;
- to make education accessible to the poor and physically, mentally and socially handicapped as well as to those who are educationally disadvantaged.

In addition, the Department of Education's mission, as determined by the Gender Equity in Education Policy (Department of Education, 2003), is to improve educational opportunities for women and girls.

3.3 Main UBE Goals and Objectives

Based on the vision and mission statements, the overarching **Goal** of this UBE plan is as follows:

"All children of school age must enrol in school, complete nine years of basic education and should have learnt skills, knowledge and values covered in the basic education curriculum"

The National Constitution of PNG makes it explicit that all children have the right to quality education. The constitution is clear about the government's responsibility to make the benefits of education available to all citizens. It is the prerequisite to the mobilization that is necessary for the country's social, economical and political growth and development.

The Papua New Guinea UBE Plan (2010-2019) has been developed to identify long term strategic policy directions that need to be taken by Government in order to achieve stated goals. The plan will address systemic issues related to achieving the overall goal to increase the elementary Net Enrolment Ratio of 6-year-olds to 85% by 2015 and 90% by 2019.

It is expected that this Plan will:

- play a key role in the reduction of poverty and societal inequality through the implementation of strategic actions to allow for equal opportunities for all;

- identify strategic solutions for certain key issues, such as reforming education management structures and building institutional capacity to allow for the attainment of the basic education goals as expressed in the National Education Plan.

The overall indicator for the UBE could therefore be described as

"By the end of 2019, 80% of all children enrolled in Grade 1 in 2011, being 80% of 6-year olds in 2011, will graduate from Grade 8, and out of which 90% meet the minimum standards of the UBE learning objectives"

In order to achieve the UBE goal, three inter-related specific results have been identified:

1. Access improved
2. Retention enhanced
3. Quality of education improved

and two **cross-cutting** or **underlying** results that will contribute to achieving the specific results

4. Basic Education Management enhanced
5. Equity enhanced

These results are elaborated upon in Chapter 4

In the NEP these results (or minor outcomes) are largely the same but given a different weight:

1. Access
2. Quality curriculum and monitoring
3. Quality teacher education and training
4. Management.

Retention is covered under access. Quality curriculum and quality teacher education are considered separately whereas in this plan they have been combined under quality of education. In the National Education Plan, equity is treated as a cross cutting issue rather than being specifically addressed.

CHAPTER 4 RESULTS, OUTPUTS AND ACTIVITIES

In this chapter the **Results** required to achieve the UBE **Goal** are described. For each Result to be achieved, a number of **Outputs** need to be realized through specific **Activities**, which are also described in this chapter. At activity level, the required **Inputs** are given in broad terms. **Indicators** are given for both the results as well as the outputs. Furthermore, it is indicated which institution/position has the main responsibility for **Implementation**. The **Reporting functions** relate to the flows of information on progress made. The information that should also link up to the Education Management Information System (EMIS) will need to be further developed.

It should be kept in mind that the UBE plan covers a period of 10 years, during which the Goal and Results are not likely to change. However, the progress made, constraints encountered, possible unforeseen developments, and lessons learnt along the way will affect implementation. Detailed and inter-linked planning on an annual basis as well as regular reporting is required at all levels, in order to implement the UBE plan. All schools will be required to produce and use a School Learning Improvement Plan which will cover all of the results addressed in this UBE plan. All schools know their own needs and will be expected to prioritise following their own action research.

As stated in Chapter 2 great differences exist between and within the provinces regarding access, retention, quality of education, and education management. When implementing this plan, extra attention should hence be given to those areas with lower than average performances. These are generally the more remote areas and/or areas with low population densities.

In the following sections the following Results are addressed:

- 4.1 Access improved
- 4.2 Retention enhanced
- 4.3 Quality of education improved
- 4.4 Basic Education Management enhanced
- 4.5 Equity enhanced

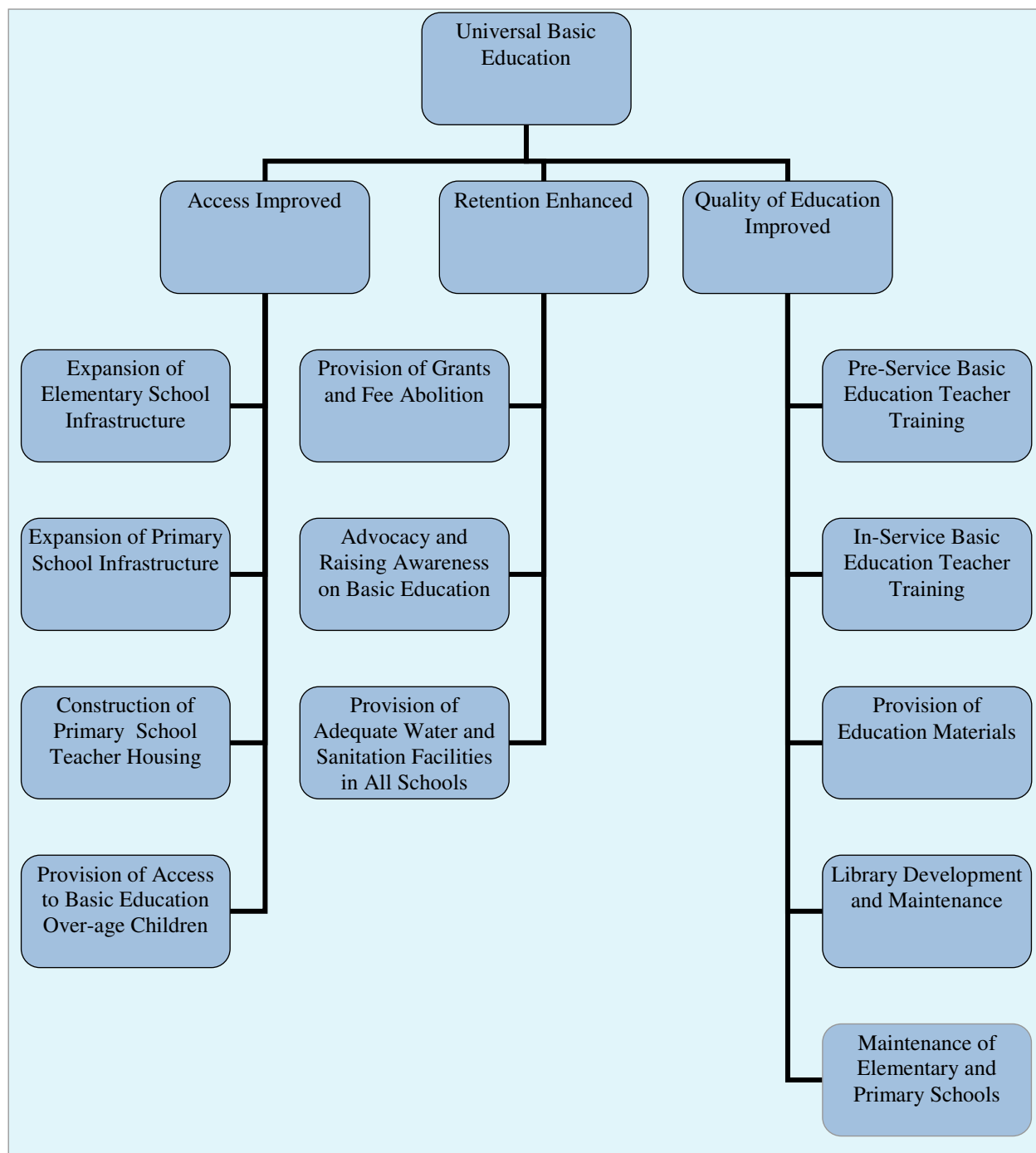
The gross and net enrolment rates that are targeted as a result of these interventions is shown in table 18.

Table 18. Gross & Net Admission and Enrolment Rates, 2010-2019

Year	Gross Admission Rate (%)	Gross Elementary Enrolment Rate (%)	Gross Prep-Gr 8 Enrolment Rate (%)	Net Admission Rate (%)	Net Elem Enrolment Rate (%)	Net Prep-Gr 8 Enrolment Rate (%)
2010	98.5	87.5	75.1	25.0	59.1	60.9
2011	106.5	97.1	77.6	65.0	68.3	63.6
2012	106.0	101.8	79.3	100.0	77.5	66.3
2013	108.0	104.8	80.7	100.0	86.8	68.9
2014	110.0	106.0	82.2	100.0	96.0	71.6
2015	108.0	106.5	85.5	100.0	96.0	74.3
2016	106.0	105.8	88.7	100.0	96.0	76.9
2017	104.0	103.9	92.0	100.0	96.0	79.6
2018	102.0	101.9	94.7	100.0	96.0	82.3
2019	100.0	99.9	96.0	100.0	96.0	85.1

Figure 7 shows how the interventions contribute towards the overall UBE objective:

Figure 7. Interventions Tree PNG Universal Basic Education



CROSS - CUTTING INTERVENTIONS

Equity Enhanced

- Gender (covered under Access, Retention, Quality)
- HIV/Aids (covered under Access, Retention, Quality)
- Special Needs Educations
 - Study on Special Needs Education Requirements
 - Implementation of Special Needs Education
- Most vulnerable children

Basic Education Management Capacity Enhanced

- Training of Headteachers and Site Leaders
- Technical & Planning Support for DEAs
- Support to School Inspectorate
- Support to Provincial and National Education Authorities

4.1 Access Improved

Basic education should be made available to all children regardless of gender, geographical setting, HIV/AIDS status, disabilities, culture, religion, race and/or socio-economic status. Providing equitable accessibility to elementary and primary education is a key challenge to be addressed.

A sufficient physical capacity in terms of enough weatherproof classrooms equipped with adequate numbers of desks and chairs is an important pre-requisite.

Result	<ul style="list-style-type: none"> All 6-year olds have access to adequate school facilities and can complete a full basic education.
Indicators	<ul style="list-style-type: none"> Percentage of all 6-year olds having adequate access to a elementary school, allowing them to complete Grade 2; Percentage of all 9-year olds progressing to Grade 3 and having adequate access to a primary school, allowing them to complete Grade 8.

There are a number of challenges with regard to improving access. The biggest challenge is to get all children into elementary prep at the age of six years in a very short period of time. This will require a major planning effort at all levels- schools, district, provincial and national and a significant advocacy campaign to support it at all levels of society. It is also recognized that many provincial authorities have their own private, or local, priorities that may not necessarily be in accord with those of the DoE. This may lead to expansion of opportunities at the post primary level of education at the cost of development in basic education.

Urgent attention will be given to those areas where there are still many children entering grade 1 in the primary schools rather than in elementary prep (also see table 5). The benefits of all children enrolling at the age of 6 years are many. In particular, the benefit for girls is that all will be able to complete their basic education prior to reaching puberty. All school expansion will be consistent with the availability of teachers allocation, and funding for the running of the schools. Expansion plans should be included in the School Learning Improvement Plans.

There are four inter-linked outputs identified to achieve **improved access**. These are:

- 4.1.1 Expansion of elementary school infrastructure
- 4.1.2 Expansion of primary school infrastructure
- 4.1.3 Construction of primary school teacher housing
- 4.1.4 Provision of access to basic schooling for over-age children

The costs of the infrastructure required under 4.1.1, 4.1.2 and 4.1.3 will be spread amongst many different players. These include the Government of PNG, the District Services Improvement Programme (DSIP), the Local-level Governments, the church agencies, donor partners and the school communities themselves. For the implementation already established systems will be used. These systems include those developed by the Department in consultation with donor partners and also by the districts through the Joint District Planning and Budget Priorities Committee. This latter system is used to administer the District Services Improvement Programme.

4.1.1 Expansion of Elementary School Infrastructure

In line with the policy of all 6-year old children entering Elementary (E-Prep.) by 2012 and completing 3 years of elementary education, it is required that an adequate number of classrooms be constructed to cater for new yearly intakes. There will be an implementation schedule for the establishment of these elementary schools included in the District Education Plans (DEP). New elementary schools will have to be built in those areas where there are none and some existing schools will have to be expanded in order to cater for the growing 6-year old population.

The age profile of the children enrolling will have to change incrementally to include predominantly 6-year olds. Children who have not been enrolled in elementary prep prior to a certain age will be provided with the opportunity of alternative education support (see section 4.1.4).

All levels of Government will have to put efforts into making communities aware of the importance of establishing elementary schools for their children. The responsibility for the building of new elementary schools and classrooms rests with the districts and the communities themselves. The plan provides for K40,000 to be made available to communities for each class of elementary prep to be established. This funding will be expected to provide the communities with the catalysts for building the three classrooms that a school requires. The funding will be based upon the approved District Education Plan, the approval for which will come from both the Provincial Education Board and the District Management Team. These approvals will be the trigger for schools and the districts to be able to access funds for this and other activities. The funding will be in the form of building materials, and in particular roofing and water tanks, and a small cash component.

Output	<ul style="list-style-type: none"> • Sufficient Elementary school classrooms built in PNG, to cater for all districts
Implemented by	<ul style="list-style-type: none"> • District administration and school communities
Activity	<ul style="list-style-type: none"> • School community builds classrooms as per District Education Plan, Annual Operational Plan and budget
Inputs	<ul style="list-style-type: none"> • Government and donor funding • School community contributions (kind/cash)
Indicator	<ul style="list-style-type: none"> • Number of new Elementary class rooms established by 2012
Reporting functions	<ul style="list-style-type: none"> • BOM Chairperson reports to District Education Administrator on progress of establishment • District Education Administrator to provide these with a summary to PEB • Provincial Education Planner provides report to DoE

The financial projections in this document demonstrate the financing that will be needed for PNG to achieve its education Millennium Development Goals by 2015. The projections are based on an assumption that PNG will achieve a net preparatory enrolment rate of 100% beginning in 2012. The model will be updated depending on progress.

The implementation of the combined strategies will result in the projected enrolments in Elementary schools as reflected in table 19. The final column gives the Gross Admission rate. This rises to above 100% in recognition of the fact that there will still be some enrolment of children over the age of 6 years even in the years following 2012.

Table 19. Elementary School Enrolments by Grade, 2010-2019

Year	Prep	Grade 1	Grade 2	Totals	Gross Admission Rate (%)
2010	186,446	164,908	132,214	483,569	98.5
2011	207,101	182,718	161,610	551,429	106.5
2012	211,824	202,959	179,063	593,847	106.0
2013	221,786	207,588	198,900	628,273	108.0
2014	232,136	217,350	203,436	652,922	110.0
2015	234,214	227,493	213,003	674,710	108.0
2016	236,230	229,530	222,943	688,703	106.0
2017	238,178	231,505	224,939	694,623	104.0
2018	240,054	233,415	226,875	700,344	102.0
2019	241,851	235,253	228,746	705,850	100.0

Applying an assumed elementary prep class size of 35, which is based upon historical figures, provides us with the staffing figures, as given in table 20. It is assumed that there will be a 2% attrition rate for elementary school teachers.

Annex A provides the enrolments rates of elementary, lower and upper primary school by gender.

Table 20. Elementary School Staffing by Grade, 2010-2019

Year	Prep (#)	Grade 1 (#)	Grade 2 (#)	Totals (#)	Pupil Teacher Ratio (#)
2010	5,327	4,808	4,393	14,528	33.4
2011	5,917	5,327	4,808	16,052	34.4
2012	6,052	5,917	5,327	17,296	34.3
2013	6,337	6,052	5,917	18,306	34.3
2014	6,632	6,337	6,052	19,021	34.3
2015	6,692	6,632	6,337	19,661	34.3
2016	6,749	6,692	6,632	20,074	34.3
2017	6,805	6,749	6,692	20,246	34.3
2018	6,859	6,805	6,749	20,413	34.3
2019	6,910	6,859	6,805	20,574	34.3

4.1.2 Expansion of Primary School Infrastructure

New classrooms will need to be built for new primary school classes. It was initially anticipated that the phasing put of Grade 1 and 2 classes would free up sufficient classrooms for use in the upper grades but most of this excess capacity has now been used up. Forward planning must take place to ensure additional new Primary schools and classrooms are provided to accommodate any surplus of pupils completing Elementary schools. These implementation schedules will be included in the District Education Plans.

This need has arisen because of Elementary schools being established in areas where previously there was no access to education. This has resulted in children completing elementary schooling without having access to a nearby primary school to continue their basic education. The Local-level Governments and districts should be responsible for these expansions but it is recognised that at present they have neither the financial resources nor the managerial capacity that is required. Separate strategies will be developed to deal specifically with schools from the most remote parts of the country. Buildings will include classrooms, staff housing and a library facility.

The responsibility for the expansion of existing primary schools rests with the districts and the communities themselves. The plan suggests that classrooms cost an average K 80,000, much of which will be funded through the District Services Improvement Plan. Some of these classrooms will be of the kit variety whilst others will be constructed through providing the individual school communities with funds that they would need. The latter method would be used in the more rural areas where it is actually much preferred by communities because it also serves as a way to inject income into a community. Table 21 shows the anticipated enrolment figures.

Output	• A total of 4,325 Primary school classrooms built in PNG equitably amongst the districts
Implemented by	• District administration and school communities
Activity	• School community builds classrooms as per District Education Plan, Annual Operational Plan and budget.
Inputs	• Government and donor funding • School community contributions (kind/cash)
Indicator	• Number of new Primary classrooms established by 2012
Reporting functions	• Board of Management Chairperson reports to District Education Administrator on progress of establishment • District Education Administrator provide these with a summary to the Provincial Education Board • Provincial Education Planner provides report to DoE

Classes in primary schools are re-grouped in Grade 3 and in Grade 7 with class sizes of 37 and 35 respectively. It is understood that in some areas schools will not provide a full primary education through to Grade 8 but will only offer a lower primary education through to Grade 6 and will then continue the primary education at a central school.

Table 21. Primary School Enrolment by Grade, 2010-2019

Year	Grade 1	Grade 2	Grade 3	Grade 4	Grade 5	Grade 6	Grade 7	Grade 8	Totals
2010	26,779	34,725	132,809	119,627	102,442	94,113	81,977	73,683	666,155
2011	17,852	25,667	141,591	124,674	107,808	91,636	85,621	74,496	669,345
2012	8,926	17,495	158,966	132,766	112,210	96,501	84,256	78,007	689,129
2013	0	8,748	167,313	149,381	119,677	100,630	89,666	76,815	712,230
2014	0	0	176,391	157,065	134,576	107,172	94,479	81,642	751,325
2015	0	0	199,367	167,820	145,419	124,471	101,660	86,078	824,816
2016	0	0	208,743	192,202	159,581	138,733	119,278	92,621	911,159
2017	0	0	218,484	203,882	187,583	156,889	134,291	108,651	1,009,78
2018	0	0	220,440	213,397	198,983	184,419	153,751	131,605	1,102,59
2019	0	0	222,338	215,307	208,269	195,626	180,730	150,676	1,172,94

As per the National Education Plan generalist teaching will become the norm in the upper primary grades. Applying these criteria is expected to result in staffing requirements as presented below. It is assumed that there will be a 4% attrition rate for primary school teachers. Table 22 shows the anticipated staffing numbers by grade.

Table 22. Primary School Staffing by Grade, 2010-2019

Year	Grade 1	Grade 2	Grade 3	Grade 4	Grade 5	Grade 6	Grade 7/8	Totals	Pupil: Teacher Ratio (#)
2010	536	714	3,589	3,625	3,481	3,280	5,615	20,840	31.6
2011	357	536	3,827	3,589	3,625	3,481	5,567	20,982	31.6
2012	179	357	4,296	3,827	3,589	3,625	5,445	21,318	32.0
2013	0	179	4,522	4,296	3,827	3,589	5,398	21,811	32.3
2014	0	0	4,767	4,522	4,296	3,827	5,525	22,937	32.4
2015	0	0	5,388	4,767	4,522	4,296	5,703	24,677	33.1
2016	0	0	5,642	5,388	4,767	4,522	6,240	26,559	34.0
2017	0	0	5,905	5,642	5,388	4,767	6,941	28,644	35.0
2018	0	0	5,958	5,905	5,642	5,388	8,153	31,046	35.3
2019	0	0	6,009	5,958	5,905	5,642	9,469	32,982	31.6

4.1.3 Construction of Primary School Teacher Housing

There are many primary schools in remote areas that do not have teachers, often the reason being that no adequate housing is available. There is a need for teacher housing in these schools in order to provide an incentive for teachers to teach in these areas and to improve teacher time on task.

The responsibility for the building of new primary school teacher housing rests with the districts and the communities themselves but very few houses have been built. The UBE plan suggests that a programme of housing be embarked upon to provide 70% of teachers with a house. The funding will come through the Local-level Governments based upon the approved District Education Plan.

Output	<ul style="list-style-type: none"> • A total of 7,700 Primary school teacher houses built in PNG, subdivided over the districts and schools
Implemented by	<ul style="list-style-type: none"> • District administration and school communities
Activity	<ul style="list-style-type: none"> • School community builds classrooms as per District Education Plan, Annual Operational Plan and budget.
Inputs	<ul style="list-style-type: none"> • Government and donor funding • School community contributions (kind/cash)
Indicator	<ul style="list-style-type: none"> • Percentage of Primary school teacher having a house
Reporting functions	<ul style="list-style-type: none"> • Board of Management Chairperson reports to District Education Administrator on progress of construction • District Education Administrator to provide these with a summary to the Provincial Education Board • Provincial Education Planner provides report to DoE

4.1.4 Provision of Access to Basic Education for Over-age Children

If a policy is made to only allow 6- or 7-year old children to enrol in school there are still issues regarding the older children who have not yet had an opportunity to enrol. It is not possible to impose age restrictions on entry without providing alternatives for those who have yet to enrol. A study will be carried out in 2010 and 2011 to determine the number of children who would wish to take up such an opportunity and also to look at the various options for different types of curricula, and implementation modalities that could be used.

In the rural areas there is the possibility of extending the period by which no children older than 6 can enrol. In these areas classes would simply become larger. The problems however will be in the urban areas due to capacity constraints. A few options are noted below:

- Shift teaching could be introduced in urban areas and the older children could be taught separately;
- The older children could have a separate curriculum developed for them to allow them to achieve the outcomes expected in a shorter period of time;
- Older children could be placed in a higher grade when they enrol. This would involve the development of tests to ascertain the correct level for the children.

Following the outcome of a study on access for over-age children, its endorsement and funding, there will be a number of cost centres to provide for these children. Initially these would be salaries for their teachers and subsidies to support their education. In addition, there may need to be some new infrastructure and curriculum development but these will depend upon any policy decisions taken.

The majority of the funding for these activities will come from the DoE and will be administered in the same way as for the formal education system.

Output	• All children, irrespective of age, have access to basic education to Grade 8.
Implemented by	• To be determined by study
Activities	• Conduct the study as per Terms of Reference established by DoE • Implementation of Access to Basic Education to Over-age children programme
Input	• Government and donor funding
Indicator	• Percentage of all children under 18 having completed their basic education by 2018
Reporting functions	• To be determined by study

4.2 Retention Enhanced

There are problems with getting children into school in the first place but of equal concern is the issue of keeping the children in school until they complete their full basic education. The drop-out problem is the single most important challenge to achieving full net enrolment, or everyone having completed a basic education cycle.

Enhancing retention also means enhancing the efficiency of the educational system

There are three inter-linked outputs identified to achieve enhanced retention. These are:

- 4.2.1 Provision of grants and abolition of school fees
- 4.2.2 Advocacy and awareness on basic education
- 4.2.3 Provision of water and sanitation facilities in all schools

Quality of education is also an important factor affecting retention, and is addressed in section 4.3.

Result	• The retention of children who entered the basic education system is enhanced.
Indicator	• Percentage of all children that entered basic education completing Grade 8

As a result of these initiatives it is expected that the retention and completion rates will improve as shown in the tables 23 and 24.

Table 23. Grade 1 to 6 Retention by Year and Gender.

Period	M (%)	F (%)	T (%)	GPI
2007 to 2012	59.6	59.9	59.7	100.5
2008 to 2013	60.2	59.1	59.7	98.2
2009 to 2014	64.0	61.5	62.8	96.0
2010 to 2015	64.9	64.9	64.9	100.0
2011 to 2016	69.2	69.2	69.2	100.0
2012 to 2017	74.0	74.0	74.0	100.0
2013 to 2018	88.8	88.8	88.8	100.0

Table 24. Grade 8 completion rates by Year and Gender.

Period	M (%)	F (%)	T (%)	GPI
2010	51.8	44.6	48.4	0.86
2011	53.9	42.1	47.6	0.78
2012	53.7	43.8	48.5	0.82
2013	50.5	42.8	46.5	0.85
2014	51.3	45.1	48.1	0.88
2015	51.9	47.0	49.4	0.91
2016	53.5	49.9	51.7	0.93
2017	60.3	57.7	59.0	0.96
2018	70.3	68.8	69.5	0.98
2019	77.5	77.5	77.5	1.00

It needs to be noted that the completion rates remain relatively stagnant until such time as the abolition of school fees, which is the principal driver for improvements in retention, works through the system. There are sharp rises in the rates after 2015. It is expected that some of the quality initiatives that are being put in place as well as the continued expansion of the School Learning Improvement Program will also have a positive effect on retention and completion rates.

4.2.1 Provision of Grants and Abolition of School Fees

There is a widespread acknowledgement that a key factor for UBE to be achieved is the elimination of school fees at elementary and primary schools. Fees are known as being a major barrier to both enrolling children in school as well for them to complete their basic education.

The current assumption for purposes of modelling is that the gradual elimination of fees will lead to a rapid growth of enrolment in elementary prep. It is further assumed that there will be significant improvements in the historical low inter-grade retention rates following the gradual elimination of fees in primary schools. It is acknowledged, however, that other factors and lack of supply of teachers and school facilitates will continue to constrain enrolments. The actual response to the incentive of removing fees will be monitored and the forecasting model adjusted accordingly.

The systems for the distribution of these funds will initially be the existing systems as established by the Department of Education. These systems will be reviewed in the early years of the plan.

In order to further improve participation, particularly female participation and retention, the grants to primary schools will be enhanced to support activities that are included in the School Learning Improvement Plans. This recognises the fact that there are constraints that are local in nature and require specific addressing. Examples of the type of activities that individual communities might put in place would include school feeding programmes, school transport programmes and initiatives to ensure that girls remain in school.

Presently the school fees are set at a maximum, with the GoPNG subsidy being fixed per group (Elementary, Lower Primary, and Upper Primary), with the parental contributions variable per school. By the end of the plan period it is envisaged that when there is a full subsidy provided there will be basic materials and supplies sent to schools in addition to a rather smaller cash grant.

With the abolition of the school fee system, each school will need to produce transparent budgets and provide full accountability. Section 4.4 addresses these requirements, including the training to provide for the required skills and knowledge

Output	<ul style="list-style-type: none"> • Gradual abolition of school fees and simultaneous expansion of school grants
Implemented by	<ul style="list-style-type: none"> • GoPNG/DoE in close cooperation with the districts and Boards of Management
Activities	<ul style="list-style-type: none"> • A school fee phasing out schedule to be determined for each grade by GoPNG • Schools to produce transparent budgets and provide full accountability including on the School Learning Improvement Plans.
Input	<ul style="list-style-type: none"> • Government and donor Funding
Indicator	<ul style="list-style-type: none"> • By 2015 the school fees are abolished, and GoPNG will fully fund basic education.
Reporting functions	<ul style="list-style-type: none"> • Provincial Education Adviser to provide a summary of subsidy grants to the DoE • District Education Administrator provides summary of basic school materials received by schools • Site leaders report on School Learning Improvement Plan activities to District Education Administrators • District Education Administrator provide these with a summary to the Provincial Education Board. • Provincial Education Planner provides report to DoE

4.2.2 Advocacy and Raising Awareness on Basic Education

In order to achieve targets relating to access and retention there is a need for an extensive and wide ranging advocacy campaign to combat the fact that in recent years many children have not been enrolling at age 6 and that many of those that do enrol drop out of school. This would suggest that the Department is not getting its message across. Parents and children will be made fully aware of the importance, necessity and benefits of basic education. The campaigns will direct the parents, and the communities in which they live, to be more involved and have a greater sense of responsibility towards basic education. It is of critical importance that parents understand that even if education is "fee free" that they still have a responsibility to support their schools in other areas and also to provide the support that their children need in order that they complete a full basic education.

The advocacy campaign will be developed by the Department of Education but would have to be delivered locally with provincial and district officials taking responsibility for this. The network of District Women Facilitators will be used to support this initiative.

The timing of this campaign will be important in that it has to be consistent with the various access target dates as set in the plan. This means that much of the work will be conducted in the years leading up to the 2012 target for all 6-year old children enrolling in elementary schools. Activities at the community levels will be supported through funds being allocated directly to the schools, to the districts and to the provinces.

Output	<ul style="list-style-type: none"> • Parents and children fully aware of the importance of Basic Education
Implemented by	<ul style="list-style-type: none"> • District Education Administrators in close cooperation with community leaders and schools
Activities	<ul style="list-style-type: none"> • Implement advocacy and awareness campaigns in school communities consistent with a National Communications Strategy
Input	<ul style="list-style-type: none"> • Government and donor funding
Indicator	<ul style="list-style-type: none"> • By 2011 all parents and their children are fully aware of the needs and benefits of basic education
Reporting functions	<ul style="list-style-type: none"> • Site leaders report on advocacy activities to the District Education Administrators • District Education Administrators report to provincial authorities • Provincial Education Planner to provide report to DoE

4.2.3 Provision of Water and Sanitation Facilities in All Schools

Poor water and sanitation facilities have been identified as being a major reason for children, particularly girls, dropping out of school. There is a desperate need for all schools to be able to provide both an adequate supply of safe drinking water as well as sufficient toilet facilities for both boys and girls.

It is assumed that all new classrooms constructed as a part of activities 4.1.1 and 4.1.2 will have an appropriate number of water tanks attached at a ratio of one tank for every 60 pupils.

Output(s)	<ul style="list-style-type: none"> • Adequate toilets and drinking water facilities in place in all basic education schools
Implemented by	<ul style="list-style-type: none"> • District and school communities
Activities	<ul style="list-style-type: none"> • Construction of adequate toilets as per District Education Plan • Construction of adequate drinking water tanks as per District Education Plan
Input(s)	Government and donor funding
Indicator(s)	<ul style="list-style-type: none"> • Percentage of all schools having adequate drinking water facilities for their pupils (ratio 1 watertank/60 pupils) • Percentage of schools having sufficient and adequate toilets for their pupils (ratio 1 toilet/25 pupils)
Reporting functions	<ul style="list-style-type: none"> • Board of Management Chairperson reports to District Education Administrator on progress of construction • District Education Administrator provide these with a summary to Provincial Education Board • Provincial Education Planner provides report to DoE

The situation regarding toilets is that there have to be sufficient numbers to satisfy the standard of one toilet for every 25 pupils. New toilets will need to be built whenever extra classes are taken on due to enrolment expansion and there will also need to be new toilet construction at many schools that do not have adequate toilet facilities for their current enrolments.

The responsibility for the construction of toilets rests with the districts and the school communities themselves. The plan suggests that "ventilated improved pit" latrines cost K 2,500, and good quality water tanks K 5,000 each. The funding will come through the Local-level Governments based upon the approved District Education Plan, the approval for which comes from both the Provincial Education Board and the District Management Team, and the School Learning Improvement Plans.

4.3 Quality of Education Improved

The quality of education provided is crucial for achieving Universal Basic Education. In terms of retention for example it is known that children are more likely to drop out of school if there is no relevant, quality education provided. The quality of education will be measured by results from the Curriculum Standards Monitoring Test and the Grade 8 examination.

The current GoPNG policy is that children complete the basic education without repetition of grades. This means that it is of crucial importance that teachers are able to give sufficient attention to those pupils that do not meet the required standards. It is a waste of energy, time and funds for children to pass to the next grade if they do not master the skills and knowledge required in the previous grade. Entering a next grade without a solid base is likely to create frustration for both pupils and teachers as those who lack the basics slow down the process of teaching and learning. In cases where the teacher is not able to provide sufficient support to these weaker pupils, remedial teaching by other teachers or through parents will be considered. The School Learning Improvement Plan will address this quality aspect.

There are six inter-linked outputs identified to achieve **improved quality of education**:

- 4.3.1 Pre-service basic education teacher training
- 4.3.2 In-service teacher training for all basic education teachers
- 4.3.3 Provision of education materials to all elementary and primary levels
- 4.3.4 Library development and maintenance
- 4.3.5 Maintenance of all elementary and primary schools
- 4.3.6 Maintenance of minimum number of learning hours

Management aspects related to quality assurance are addressed in section 4.4.

Result	<ul style="list-style-type: none"> • The quality of education in PNG allows the PNG children to master the skills, knowledge, values and attitude required through the curriculum.
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Indicator	<ul style="list-style-type: none"> • Percentage of all children graduating from Grade 8, meeting the minimum standards for mastering the basic education curriculum
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4.3.1 Pre-Service Basic Education Teacher Training

Quality pre-service teacher education is critical if targets relating to UBE are to be met. There is little detailed data presently available on teacher attrition. This will be incorporated within the Education Management Information System in order to quantify the teacher demand in the coming years. For the sake of this plan, an attrition rate of 4% is assumed for primary school teachers and pupil to teacher ratios of 35:1 and 37:1 for those entering elementary prep and primary grade 3 classes respectively throughout the country.

The number of elementary and primary teachers required each year, when attrition has been taken into account, is shown in the table 24.

Table 25. Basic Education Teacher Requirements by Year, 2010-2019

Year	Elementary Level (#)	Primary Level (#)
2010	1,872	653
2010	1,815	975
2012	1,565	1,175
2013	1,356	1,346
2014	1,081	1,998
2015	1,020	2,657
2016	806	2,869
2017	574	3,147
2018	572	3,548
2019	569	3,178

At the elementary level it is assumed that the process of institutionalising the Elementary Teacher Training course will continue and this is one of the main activities in this plan. It is further acknowledged that this process will take a number of years and hence the mixed mode delivery of teacher education for elementary teachers will continue during the interim.

The elementary teacher training has been grossly under-funded in recent years, in particular the opportunities for the trainers to visit their trainees on a regular basis. This under-funding will be addressed in the early years of the plan.

There is also need for some expansion in pre-service primary level teacher education to satisfy the growing demand for teachers resulting from increased enrolments. The DoE will properly support the recurrent costs of pre-service primary teaching which has for many years been chronically under-funded by the government. This has resulted in a need to be supported from sources other than the recurrent budget.

The funding responsibility for all pre-service teacher education remains with the DoE. Increasing the number of teachers will require the expansion of existing teacher training colleges and/or construction of new ones.

Scholarships could be offered for teachers from remote communities lacking teachers, assuming that those trained will go back to their home area.

Output	<ul style="list-style-type: none"> • Sufficient qualified teachers trained to meet the increased demand
Implemented by	<ul style="list-style-type: none"> • DoE, Teacher Training Colleges
Activities	<ul style="list-style-type: none"> • Increase capacity (expansion) of teacher training colleges • Training of increased numbers of elementary school teachers • Training of increased numbers of primary schools teachers
Input	<ul style="list-style-type: none"> • Government funding
Indicators	<ul style="list-style-type: none"> • By 2012, 18,000 elementary teachers graduated • From 2013 onwards, the teacher training college capacity to increase by 2.7% per

	annum to accommodate growing population
Reporting function	• College principals report enrolments and construction developments to DoE

4.3.2 In-Service Basic Education Teacher Training

An on-going programme of professional development is required to allow- and ensure teachers to remain updated in their knowledge and skills. In-service teacher training will be provided to all basic education teachers on an annual basis.

Elementary school teachers will be provided with the opportunity to improve their teaching and build on their initial training as well as the management of their schools. At the primary level there are specific areas that require attention in order that teachers are able to cope with the new Outcome Based Curriculum. These include identified areas of concern such as bridging and the teaching of multi grade classes, but also on HIV/Aids. There is a need for opportunities for all teachers to enhance their basic background knowledge through distance education and the utilisation of media in both their special subject interests and pedagogy.

The funding sources for these activities will be shared amongst the various stakeholders. In the past, teacher professional development has been considered a national responsibility but the DoE has never had the funds to be able to discharge this responsibility effectively. In view of the present situation the DoE will cover the costs of teachers upgrading their knowledge as well as the provision of professional development materials and professional assistance. The provincial, district and school authorities will be responsible for the costs of running all workshops at the school and at the district levels.

Output	• Teachers with updated skills and knowledge
Implemented by	• DoE, Provincial, District and School authorities
Activities	<ul style="list-style-type: none"> • Development of in-service training courses and materials • Develop an annual professional development programme – Provincial In Service Training Officers, District Education Administrator, Headteachers • Organisation of training workshops • Development of distance learning programmes
Inputs	<ul style="list-style-type: none"> • Government funding • Provincial, District and schools funds
Indicator	• By 2017 , all teachers use in their teaching newly obtained skills and knowledge, as acquired through the In-Service Training Programme
Reporting functions	<ul style="list-style-type: none"> • School Headteachers report on the progress of professional development to the Provincial In Service Training officers. • Provincial In Service Training officers report to the Staff Development Unit

4.3.3 Provision of Education Materials

The supply and re-supply of textbooks and resource materials to primary schools has long been a major constraint to providing quality education. In most cases the pupil:textbook ratio has been too high to ensure sufficient textbook access for each pupil to master the subject matter as per curriculum.

The DoE is responsible for the initial supply of all textbooks and resource materials and for delivery to the provincial capitals. The provinces themselves are now responsible for distribution to the schools. The National Policy for Procurement, Distribution and Storage of Curriculum Materials requires that school textbooks be re-supplied every five years. The Provincial Governments have been responsible for the re-supply of textbooks but have demonstrably been incapable of carrying out this responsibility.

Output(s)	• Pupils and teachers have access to the textbooks and resource materials required for mastering the subject matter as per their curriculum
Implemented by:	• DoE in consultation with the schools
Activities	<ul style="list-style-type: none"> • Study leading to a policy decision regarding a cost effective method for the resupply of textbooks • A determination of book lists and other resource materials for elementary education.

	<ul style="list-style-type: none"> • Initial supply of textbooks for elementary and primary schools • Annual process for re-supply of textbooks
Input(s)	<ul style="list-style-type: none"> • textbooks and resource materials • grants for re-supply of textbooks
Indicator(s)	<ul style="list-style-type: none"> • Percentage of pupils having adequate access to textbooks supporting them in mastering the subject matter as per curriculum
Reporting functions	<ul style="list-style-type: none"> • School Headteachers report to the District Education Administrators on the supply and re-supply of textbooks. • The District Education Administrators compile these reports and provide a summary to the Provincial Materials Officers • Provincial Materials Officers compile the district reports and provide a summary to the Curriculum Development and Assessment Division

The book list for primary education has already been determined but this is not yet the case for elementary. This determination will be dependent upon a decision to be made by the National Executive Council following a submission on the future direction of elementary education and, in particular, the language of instruction.

Funding for both the supply and the re-supply of textbooks will come from the National Government. The exact mechanism for the re supply of these textbooks has yet to be established and will be the subject of one of the studies to be carried out as part of 4.4.5.

4.3.4 *Library Development and Maintenance*

School library facilities, constituting important aspects of quality education, have long been neglected, particularly in the primary schools. In those schools that do have library facilities the stock of books is often small, outdated and not always appropriate for the children attending the schools.

These two constraints dictate that there will have to be two distinct activities. The first is the establishment of library facilities in those schools that do not have them as yet and the second is the stocking of all libraries with appropriate text books.

The library facility, particularly in urban areas, could also include computers to be used for information on DVD or even Internet access. The addition of these facilities would be the responsibility of the Board of Management. This type of access would provide an excellent opportunity for teachers to improve on their teaching.

Funding for both of these activities will come from the GoPNG. The schools themselves will be responsible for the maintenance of the collections on an annual basis.

Output	<ul style="list-style-type: none"> • Libraries, stocked with sufficient and appropriate as well as books, available at all schools to cater for the needs of both pupils as well as teachers
Implemented by	<ul style="list-style-type: none"> • GoPNG and schools
Activities	<ul style="list-style-type: none"> • Develop standards for library facilities as well as book lists at different types of schools – DoE, National Library • Establishment of library facilities in schools without library • Upgrading of existing libraries • Procurement and distribution of library books - DoE, National Library, District Education Administrators
Input	<ul style="list-style-type: none"> • Government and donor funding
Indicators	<ul style="list-style-type: none"> • Percentage of schools having a library meeting the set standards • Percentage of schools maintaining their libraries as per set standards
Reporting functions	<ul style="list-style-type: none"> • Board of Management Chairperson reports to District Education Administrator on progress of construction • Headteachers report on purchase and supply of textbooks to District Education Administrator • District Education Administrator provides a summary of these reports to Provincial Education Board • Provincial Education Planner provides report to DoE

4.3.5 Maintenance of Elementary and Primary Schools

The poor physical state of many schools in the country has contributed to a poor teaching and learning environment, thus affecting the quality of education.

The responsibility for the maintenance of basic education infrastructure rests with the Local-level Governments. The Unit Costs Study (draft) proposes that K 19 per child in elementary and K 56 per child in primary schools are sufficient amounts to be budgeted for maintenance on an annual basis. The funding will come through the Local-level Governments based upon the approved School Learning Improvement Plans and will be a part of the District Services Improvement Plan.

Many of the new classrooms being built around the country in primary schools are not to cater for increased enrolments but rather, are to replace existing bush material classrooms. As distinct from output 4.1.2, the building of new classrooms for new classes, there will also be a programme for the upgrading of bush material classrooms to permanent structures.

Output	<ul style="list-style-type: none"> Schools are maintained according the standards set with regard to weatherproofing, chairs and benches, and water and sanitation facilities
Implemented by	<ul style="list-style-type: none"> District Education Administrators and school communities
Activities	<ul style="list-style-type: none"> Regular maintenance as per School Learning Improvement Plan Replacement bush material for permanent material classrooms
Input	<ul style="list-style-type: none"> Government and donor funding
Indicator	<ul style="list-style-type: none"> Percentage of the schools meet the set school quality standards
Reporting functions	<ul style="list-style-type: none"> Board of Management Chairperson reports to District Education Administrator on progress of maintenance and building programme. District Education Administrator provide these with a summary to the Provincial Education Board. Provincial Education Planner to provide report to DoE

4.3.6 Maintenance of Minimum Number of Learning Hours.

In elementary and primary schools there is a clearly prescribed weekly minimum of 1,650 minutes to be spent on teaching and learning. This time is spread over the subjects as required by the school curriculum.

Schools need to ensure that any loss of learning time is recovered through remedial measures to be organised at the school level. School Learning Improvement Plans must indicate how schools plan to address this problem and to have reports ready for relevant supervisors on appropriate actions taken.

Output	<ul style="list-style-type: none"> Classes are taught for the prescribed number of hours
Implemented by	<ul style="list-style-type: none"> School communities, Boards of Management
Activities	<ul style="list-style-type: none"> Teacher and student attendance records kept Strategies included in SLIP
Input	<ul style="list-style-type: none"> Standards Officers advice and guidance
Indicator	<ul style="list-style-type: none"> Number of hours of teaching and learning
Reporting functions	<ul style="list-style-type: none"> Board of Management Chairperson reports to District Education Administrator.

4.4 Basic Education Management Enhanced (at ALL Levels)

Strong managerial and financial capacity in all parts of the system form the backbone of this UBE plan. This will ensure that the resources are effectively and efficiently utilised within the defined UBE priority areas and established management structure.

The administration of education needs to focus on providing a conducive environment that encourages teachers and governing bodies to deliver quality education for all PNG children.

The performance of the schools does not only depend on those institutions under direct control of the DoE, but also on other bodies at various levels. When and where possible, the DoE will involve all stakeholders in order to ensure a smooth running of the schools.

Result	<ul style="list-style-type: none"> • Management capacity adequate for the smooth administrative and financial operation of the schools
Indicator	<ul style="list-style-type: none"> • Percentage of schools having satisfactory levels of capacity in administrative and financial management. • Percentage of schools getting adequate support from line institutions to deliver good quality education

There are five inter-linked outputs identified to achieve enhanced basic education management. These are:

- 4.4.1 Training of Headteachers on administration, finances and general management
- 4.4.2 Technical and planning support for District Education Administrators,
- 4.4.3 Support to inspectors to allow them to visit schools,
- 4.4.4 Support for the work of the provincial and national education authorities
- 4.4.5 A series of research studies to be conducted.

4.4.1 Training of Headteachers on Administration, Finances and General Management

The achievement of many of the outputs outlined to date strongly depends upon headteachers being capable of carrying out their tasks and responsibilities. There will have to be considerable support given to all headteachers in order for this to be the case. In particular, they will need to be fully trained in all aspects of financial management, including procurement of school materials and infrastructure.

Further to this basic finance training there will also be training provided for school Boards of Management and other authorities, such as church agency officials, to provide the schools with the capacity to implement other parts of this plan, particularly with regard to infrastructure, maintenance and the procurement of school materials.

There will also be training in more basic school management areas including overall planning and personnel management, including how to provide an enabling environment for the teachers and how to address teacher attitude and absenteeism. Each school will be able to produce a feasible School Learning Improvement Plan, addressing access, retention, quality of education, and management aspects.

The materials to be used for this training programme and the process of delivering the training will build upon initiatives that have already been taken.

Output	<ul style="list-style-type: none"> • Schools managed and administered as per feasible School Learning Improvement Plan
Implemented by	<ul style="list-style-type: none"> • Headteachers, BOM and District Education Administrators
Activity	<ul style="list-style-type: none"> • to provide training on administrative and financial management
Inputs	<ul style="list-style-type: none"> • Government and donor funding • Training material (DoE)
Indicator	<ul style="list-style-type: none"> • Percentage of the schools implement their activities according to approved School Learning Improvement Plan
Reporting functions	<ul style="list-style-type: none"> • District Education Administrators reports to Provincial In Service Training Officer on all management training activities in their district. • Provincial In Service Training Officer provides a summary report and forwards to the Department of Education.

4.4.2 Technical and Planning Support for District Education Administrators

District Education Administrators will be involved and responsible for many of the outputs of this plan. They will require support in two main areas.

First, there is technical and planning support that will build upon initiatives that have already been taken by the DoE in supporting the district officers in the development of their plans and also by providing training in data analysis and monitoring and reporting processes. They will require further support in ensuring that their education plans are fully consistent with the District Development Plans as provided to the Office of Rural Development. These are currently being developed by the districts in order to access the District Services Improvement Programme funds that are so critical to the success of this plan.

Second, there is logistical and office support. District Education Administrators require funding to enable them to visit the schools in their district on a regular basis to provide advice, to provide support on planning issues and also to conduct the advocacy programme with school communities. The majority of District Education Administrators have totally unsatisfactory office facilities that are in desperate need of refurbishment. Principal amongst their needs is the provision of appropriate computer equipment, along with appropriate computer training.

All equipment and computer training will be procured and distributed from the national government. Funding for logistical and travel support will come direct from the Department with funds being deposited in sub national trust accounts.

Output	<ul style="list-style-type: none"> • District Education Administrators well equipped to support the schools under their jurisdiction
Implemented by	<ul style="list-style-type: none"> • DoE in consultation with District Administration
Activities	<ul style="list-style-type: none"> • Training on planning, monitoring and evaluation • Training on computer use
Inputs	<ul style="list-style-type: none"> • Grants for District Education Administrator travel • Office facilities • Provision of computers
Indicator	<ul style="list-style-type: none"> • Percentage of the District Education Administrators able to render quality support to the schools and report back into the system.
Reporting functions	<ul style="list-style-type: none"> • District Education Administrators reports to Provincial Planner on school visits in their district. • Provincial planners provide summary report for Department of Education.

4.4.3 Support to School Inspectors

The school inspectors who are based in the districts are responsible for monitoring the implementation of the curriculum and the progress being made in the development of basic education.

They require further financial support in order to enable them to visit schools on a regular basis to provide advice and to monitor progress. Most of the funding will be required for travel and officials need to be more innovative than has been the case in the past and where appropriate solutions such as the purchase of small motorcycles will be considered.

Funding will come directly from DoE through the existing provincial sub-imprest accounts.

Output	<ul style="list-style-type: none"> • School inspectors better equipped to inspect the schools under their jurisdiction
Implemented by	<ul style="list-style-type: none"> • Department of Education
Activity	<ul style="list-style-type: none"> • Training in monitoring, evaluation and reporting
Input	<ul style="list-style-type: none"> • Government financial and logistical support.
Indicator	<ul style="list-style-type: none"> • Percentage of the school inspectors monitoring and reporting as per agreed upon standards
Reporting functions	<ul style="list-style-type: none"> • Inspectors report to Regional Directors of Standards • Regional Directors summaries reports and makes regional report to Department of Education.

4.4.4 Support for the Provincial and National Education Authorities

Although the majority of the work will be done at the district and local levels there is a continued need for support for the national, the regional and the provincial institutions regarding coordination, monitoring and evaluation, and reporting roles. They play a crucial role in ensuring a smooth flow of information between the national level and the school level vice versa, and in guaranteeing that the data required for monitoring and planning are correct.

This support will build on existing capacity enhancement activities being carried out within the DoE. Support will be in the form of workshops and improved guidelines.

Output	• Cadres at National, Regional and Provincial level all equipped with the knowledge and skills to ensure smooth implementation of the UBE
Implemented by	• Cadres at National, Regional and Provincial level
Activities	• Training workshops for national, regional and provincial educational cadres in planning, monitoring and evaluation, and reporting
Input	• DoE funding
Indicator	• Percentage of cadres at National, Regional and Provincial levels meeting the established standards regarding planning, monitoring and evaluation, and reporting
Reporting function	• as per DoE establishment

4.4.5 Research Studies to be Conducted

There is a number of areas in the Plan that still requires policy analysis and development to be carried out. This policy development will be informed by solid research findings and extensive consultations. Policy areas that have been identified to date include:

- Textbook supply and re-supply
- The number of children who have never attended school
- An alternative pathway for older children
- Teacher supply demand study
- Library design and needs for primary schools, and
- The elementary language of instruction

In addition to these there are a number of other emerging areas that will require policy development including strategies for the expansion and financing of post primary education.

Output	• Sound policy making informed by research
Implemented by	• Department of Education
Activities	• Research activities and consultative workshops
Inputs	• Government and donor funding
Indicator	• Number of research reports accepted by the Top Management Team
Reporting functions	• Standards and Guidance reports

4.5 Equity Enhanced

Out of the four equity aspects, three are addressed by this UBE plan: Gender, HIV/Aids, and Special Needs Education. Adult education, though important, does not fall under the responsibility of the DoE. Education equity issues are addressed in the following sections.

- 4.5.1 Gender,
- 4.5.2 Provision of special needs education,
- 4.5.3 HIV/Aids
- 4.5.4 Most vulnerable children
- 4.5.5 Remote and over-crowded schools

4.5.1 Gender

Gender aspects are incorporated in all of the earlier policies and interventions and these are described in earlier sections. Despite this, there are still many actions that need to take place in order that targets relating to gender can be achieved. Some of these are being put in place but there is still much to be done. In particular, female participation on Boards of Management and at all levels of provincial decision making is critical. Gender Focal Points will be established in all provinces by the end of 2010 to liaise closely with the districts and with the schools.

Results	<ul style="list-style-type: none"> • Children of PNG receiving an equal opportunity for an education regardless of gender, locality or disability • Full female participation in decision making • Gender focal points in all provinces
Implemented by	<ul style="list-style-type: none"> • Schools, districts, provinces, DoE
Activities	<ul style="list-style-type: none"> • Workshops • Advocacy
Indicators	<ul style="list-style-type: none"> • Gender Parity Indexes • No. of women on PEB Apps Committees

4.5.2 Provision of Special Needs Education

A study will be conducted to determine the future needs, and associated costs, of the Special Education Unit of the DoE. In particular, there is an on-going requirement for further professional development opportunities for serving lecturers and enhanced advisory and supervisory services.

The Callan Institute will become a full member of the PNG Education System and will receive greater assistance in covering its operating costs. The institution will serve as a national institute providing higher level in-service training and education in disability studies. It is to be built around five concepts; capital expenditure, salaries and core administrative costs, disability-specific services programmes, user pay principles and human resource and capacity building. It will operate as a decentralized institution.

Output	<ul style="list-style-type: none"> • A better qualified teaching force to deal with categories of special education needs.
Implemented by:	<ul style="list-style-type: none"> • Department of Education, Callan Institute
Activities	<ul style="list-style-type: none"> • A study conducted • Institute of higher learning in special education established
Inputs	<ul style="list-style-type: none"> • Financial and technical support.
Indicator	<ul style="list-style-type: none"> • Percentage of disabled children receiving a formal education
Reporting functions	<ul style="list-style-type: none"> • Institute reports to DoE

4.5.3 HIV/Aids

It is acknowledged that the education sector in PNG has a crucial role to play in the prevention of HIV and in the care and support for students and teachers affected by AIDS. The DoE will be strengthened through a grant from the Global Fund to build a multidisciplinary unit built in support of current structures and positions. It would aim at streamlining HIV Aids linkages between the DoE Divisions such as curriculum, research, policy and planning and teacher education. This would also enable sustainable and effective coordination and monitoring of partner organizations such as NGOs, donor agencies and Churches, and between Government Departments such as Community Development, Health) and the National Aids Council Secretariat. Most importantly, it would also improve monitoring and evaluation through the strengthening of coordination systems with the sub-national level and improved coordination of HIV/Aids research and data collection.

HIV/Aids issues have been mainstreamed as core activities in the Provincial and District plans, Teacher In-service Plans and individual School Learning Improvement Plans. There has been significant community mobilization around HIV/Aids, including gender equity activities, through the AusAID funded Basic Education Development Programme.

The Department will scale up the response at the sub-national level through the recruitment of HIV/Aids Provincial Coordinators, again with the support of the Global Fund, in the eight high prevalence target Provinces. These positions would strengthen coordination and service delivery with the Department as well as with improved partnerships with Provincial Aids Committees and local partners such as NGOs and People Living With HIV AIDS groups.

Furthermore there will be the development, trial and distribution of support materials for teachers, teacher trainers and schools.

Output	• HIV/AIDS activities mainstreamed
Implemented by:	• Department of Education
Activities	• Incorporate HIV AIDS in all plans • Recruitment of provincial coordinators
Inputs	• Government and donor financial and technical support.
Indicators	• HIV/Aids prevalence age group 15-24 • No of Provincial Coordinators

4.5.4 Most Vulnerable Children

The Department of Education is committed to improving the well-being of vulnerable children and has endorsed the National Strategy For Protection and Care of Vulnerable Children 2009-2012. Whilst there has been some progress toward care and support of vulnerable children through the implementation of the HIV & AIDS Policy, training of voluntary school counsellors, the recruitment of an MVC Coordinator and the establishment of an MVC working group, a comprehensive strategies to address the needs of MVCs and student support in general, are required if access and retention for this group is to improve.

Output	• Increased access and retention for MVC
Implemented by:	• Department of Education
Activities	• Increased school based counsellors • Increased partnerships between DoE and NGOs and the churches • Include localised strategies in the SLIPs
Inputs	• Financial and technical support.
Indicators	• Percentage of vulnerable children amongst school-age population • No. of schools with permanent school counsellors

4.5.5 Remote and Over-crowded Schools

There are many parts of the country that are extremely remote and provinces have problems in delivering education services to these areas. There are some areas of the country where children can complete an elementary education but they have no nearby primary school. New institutions will have to be established in these places.

It is readily acknowledged that children in these remote areas are discriminated against in terms of education services. There is a number of initiatives that are already in place, such as the remote schools allowance, to encourage teachers to serve in the more difficult parts of the country. There is also a new programme to provide scholarships for teaching students from areas where there is a demonstrated shortage of teachers.

There are also extreme problems in some urban areas with regard to the size of classes resulting in some urban children are also being discriminated against in terms of their access to quality education services. These problems have arisen because of urban drift and the inability of schools to cope with the many inward transfers that they are instructed to take. A school classroom building programme will be put in place to support schools that have classes that are inordinately large.

4.6 Implications for Post Primary Education

The increasing number of children completing Grade 8 will have a substantial impact the flow to post-primary education. Regarding secondary education, the National Education Plan target is to provide at least 50% of Grade 8 graduates with a place in Grade 9 in each province. Though the current figure is 55% across all provinces, the anticipated increase of Grade 8 graduates may result in this percentage dropping if no additional post-primary education capacity is created.

The NEP sets the transition between Grade 10 and Grade 11 at 25% but recent history has already shown that this is unrealistic and that the demand is far greater. This document has assumed that the number enrolling in Grade 11 will remain the same which results in the transition rate dropping to 27% over the plan period. This issue will be considered more closely as a part of the National Education Plan review that is due to take place later in 2009. The projected secondary school enrolments are provided in the table 25.

Table 26. Secondary School Enrolments by Grade, 2010-2019

Year	Grade 9 (#)	Grade 10 (#)	Grade 11 (#)	Grade 12 (#)	Totals (#)
2010	39,431	33,817	10,525	9,473	93,245
2011	39,431	35,488	10,525	9,473	94,916
2012	39,778	35,488	10,525	9,473	95,263
2013	40,860	35,800	10,525	9,473	96,657
2014	40,860	36,774	10,525	9,473	97,631
2015	42,656	36,774	10,525	9,473	99,427
2016	45,052	38,390	10,525	9,473	103,439
2017	47,796	40,546	10,525	9,473	108,339
2018	55,491	43,016	10,525	9,473	118,504
2019	67,027	49,942	10,754	9,473	137,195

Classes in Grade 9 and Grade 11 in the secondary schools are assumed to have class sizes of 42 and 30 pupils respectively, as per the National Education Plan. There is a significant risk that class sizes in Grade 11 will rise if attempts are made to limit the expansion of the number of schools offering these grades. According to the National Education Plan teachers will be allocated at a rate of 1.5 per class throughout the secondary school system. When these criteria are applied, the staffing requirements will be as presented in table 26. It is assumed that there will be a 3% attrition rate for secondary school teachers.

Table 27. Secondary School Staffing, 2010-2019

Year	Lower Secondary (#)	Upper Secondary (#)	Totals (#)	Pupil Teacher Ratio (#)
2010	2,750	1,053	3,803	24.5
2011	2,816	1,053	3,869	24.5
2012	2,829	1,053	3,881	24.5
2013	2,880	1,053	3,932	24.6
2014	2,919	1,053	3,971	24.6
2015	2,983	1,053	4,035	24.6
2016	3,132	1,053	4,185	24.7
2017	3,316	1,053	4,368	24.8
2018	3,689	1,053	4,741	25.0
2019	4,376	1,064	5,440	25.2

It is assumed that the enrolments in vocational education will rise at a rate of 5% per year in accordance with that anticipated in the National Education Plan. The break up of this in terms of years of training and the types of courses provided is beyond the scope of this plan and will be further discussed as a part of the review of the National Education Plan in 2009. Anticipated enrolment and staffing figures for vocational education are shown in table 27.

Table 28. Vocational Education Enrolments and Staffing, 2010 to 2019

Year	Enrolment (#)	Staffing (#)
2010	26,215	1,748
2011	27,526	1,835
2012	28,902	1,927
2013	30,347	2,023
2014	31,864	2,124
2015	33,458	2,231
2016	35,131	2,342
2017	36,887	2,459
2018	38,731	2,582
2019	40,668	2,711

CHAPTER 5 BUDGET OF UBE

This Chapter describes the costing of each of the activities described in Chapter 4. All of the costs in the tables are in thousands of Kina and all are 2008 base costs with an assumed annual inflation rate of 3.4%.

5.1 Access Improved

There are budgets identified for the four inter-linked outputs to achieve improved access. These are:

- 5.1.1 Expansion of elementary school infrastructure
- 5.1.2 Expansion of primary school infrastructure
- 5.1.3 Construction of primary school teacher housing
- 5.1.4 Provision of access to basic schooling for over-age children

As noted in section 4.1 the costs of this part of the programme will be shared between a number of different stakeholders and will use existing systems for implementation.

5.1.1 Expansion of Elementary School Infrastructure

Table 28 includes the costs of new establishments and also provision for classes that were established in 2008 and 2009 but that were not provided with grants. This activity will start in 2010 and as with all the infrastructure activities the funding is provided in the year prior to the facilities being required.

Number of Classrooms = increase in enrolment /av. nr. Pupils per class.

Table 29. Cost of Elementary School Classrooms, 2010-2019

Year	Nr. Classrooms Required	Unit Rate K'000s	New Establishments K'000s	Catch up Schools K'000s	Total Cost K'000s
2010	236	44.7	10,549	9,312	19,861
2011	81	46.2	3,742	12,054	15,796
2012	228	47.9	10,921	8,500	19,421
2013	296	49.6	14,682	1,340	16,022
2014	59	51.7	3,050	1,461	4,511
2015	58	52.7	3,057	0.0	3,057
2016	56	54.6	3,058	0.0	3,058
2017	54	56.3	3,040	0.0	3,040
2018	51	59.1	3,014	0.0	3,014
2019	191	60.7	11,594	0.0	11,594
Totals	1,310		66,707	32,667	99,374

5.1.2 Expansion of Primary School Infrastructure

Table 29 shows the requirements for classrooms and costs from 2010 onwards. The classes that should have been built in 2008 and 2009 have now been included in the replacement classrooms intervention.

Table 30. Cost of Primary School Classrooms, 2010-2019

Year	Nr. Gr. 3 Classrooms Required	Nr. Gr. 5 Classrooms Required	Nr. Gr. 7 Classrooms Required.	Unit Rate Classroom K '000s	Total Cost K'000s
2010	59	47	34	89.8	12,572
2011	235	65	0	92.9	27,870
2012	169	156	120	96	42,720
2013	245	403	138	99.3	78,050
2014	621	293	205	102.7	114,921
2015	253	383	503	106.2	120,962
2016	263	757	429	109.8	159,100
2017	53	308	556	113.5	104,080
2018	51	251	771	117.4	125,970
2019	50	50	314	121.4	50,260
Total	1,999	2,713	3,070		836,504

5.1.3 Construction of Primary School Teacher Housing

The responsibility for the building of new primary school teacher housing rests with the districts and the communities themselves but to date very few houses have been built. The UBE plan suggests that a programme of housing be embarked to provide 70% of teachers with a house. There are currently approximately 10,000 houses in primary schools, and teachers houses will cost K 44,900 (2009). The teacher housing programme is to start in 2011 and build up over a period of four years.

Table 31. Primary School Teacher Housing Construction, 2010-2019

Year	Nr. Houses Required	Unit Rate House K'000s	Total Cost K'000s
2010	0	46.4	0
2011	274	48.0	13,156
2012	549	49.6	27,207
2013	823	51.3	42,199
2014	1,096	53.1	58,178
2015	1,096	54.9	60,156
2016	1,097	56.7	62,201
2017	1,096	58.7	64,316
2018	1,096	60.7	66,503
2019	1,095	62.8	68,764
Totals	8,222		462,680

5.1.4 Provision of Access to Basic Education for Over-age Children

The actual requirements and related cost to provide alternative education opportunities for over-age children are to be determined by an extensive study. Table 30 gives an estimate for the total costs. The preparation includes curriculum development and training for teachers. The delivery costs include teacher salaries and subsidies.

Table 32. Cost for Basic Education for Over-age Children, 2010-2019

Year	Preparation K'000s	Delivery K'000s	Total Cost K'000s
2010	4,861		4,861
2011	4,320	14,334	18,654
2012	4,282	28,433	32,715
2013	3,242	42,143	45,385
2014	656	52,212	52,868
2015	673	53,530	54,203
2016	554	44,007	44,561
2017	403	31,970	32,373
2018	257	20,352	20,609
2019	133	10,508	10,641
Total	19,381	297,489	316,870

Table 33 provides a summary of all cost for the enhanced retention interventions.

Table 33. Total Costs for Improved Access Interventions, 2010-2019

Year	Elementary Classroom Construction K'000s	Primary Classroom Construction K'000s	Primary Teacher Housing K'000s	Over-age Children Education K'000s	Totals K'000s
2010	19,861	12,572	0	4,861	37,294
2011	15,796	27,870	13,156	18,653	75,475
2012	19,421	42,720	27,207	32,716	122,064
2013	16,022	78,050	42,199	45,385	181,656
2014	4,511	114,921	58,178	52,868	230,478
2015	3,057	120,962	60,156	54,203	238,378
2016	3,058	159,100	62,201	44,561	268,920
2017	3,040	104,080	64,316	32,373	203,809
2018	3,014	125,970	66,503	20,609	216,096
2019	11,594	50,260	68,764	10,640	141,258
Totals	99,374	836,504	462,680	316,870	1,715,428

5.2 Retention Enhanced

There are budgets identified for the three inter-linked outputs to achieve enhanced retention. These are:

- 5.2.1 Provision of grants and abolition of school fees
- 5.2.2 Advocacy and awareness on basic education
- 5.2.3 Provision of water and sanitation facilities in all schools

5.2.1 Provision of Grants and Abolition of School Fees

A key policy decision for achieving UBE is to eliminate fees from elementary and primary education over the period of the plan. The total costs of subsidies by sector are shown, in thousands of Kina, in table 35, and are based on the expected number of pupils per sector as shown in table 33, and the subsidy per pupil per sector as given in table 34.

Fees will be eliminated from 2010 for those attending elementary schools and this will move into the lower- and upper primary grades from 2013 and 2016 respectively. The GoPNG has committed itself to replacing these fees with decentralized subsidies. School fees are not the only financial barrier to children entering school and extra funds may be required for special cases. The National Education Plan envisages materials rather than cash grants being sent to schools from 2012. There may be significant capacity gaps in the efficient spending and acquittal of these funds and materials.

Table 34. Enrolments of Pupils by Sector, 2010-2019

Year	Elementary	Lower Primary	Upper Primary	Secondary	Vocational	Totals
2010	485,014	412,203	243,933	93,245	26,215	1,260,610
2011	551,429	413,376	244,074	94,916	27,526	1,331,321
2012	593,847	424,206	249,470	95,263	28,902	1,391,688
2013	628,273	435,837	257,572	96,657	30,347	1,448,686
2014	652,922	457,817	272,221	97,631	31,864	1,512,455
2015	674,710	504,361	297,807	99,427	33,458	1,609,763
2016	688,703	554,364	331,967	103,439	35,131	1,713,604
2017	694,623	605,863	377,871	108,339	36,887	1,823,583
2018	700,344	629,050	453,175	118,504	38,731	1,939,804
2019	705,850	642,028	517,996	137,195	40,668	2,043,737

 Table 35. Subsidy per Pupil by Sector, 2010-2019

Year	Elementary K/pupil/year	Primary K/pupil/year	Secondary K/pupil/year	Vocational K/pupil/year
2010	98.30	137.70	267.30	267.30
2011	101.70	156.70	276.40	276.40
2012	105.10	177.70	285.80	285.80
2013	108.70	199.50	295.50	295.50
2014	112.40	220.30	305.50	305.50
2015	116.20	239.70	315.90	315.90
2016	120.20	252.20	326.70	326.70
2017	124.20	264.70	337.80	337.80
2018	128.50	277.20	349.30	349.30
2019	132.80	286.60	361.10	361.10

 Table 36. Total Subsidies by Sector, 2010-2019

Year	Elementary K'000s	Lower Primary K'000s	Upper Primary K'000s	Totals K'000s
2010	47,687	56,594	33,738	138,019
2011	56,061	65,741	37,278	159,080
2012	62,426	77,739	41,998	182,163
2013	68,290	90,701	47,647	206,638
2014	73,383	105,753	55,039	234,175
2015	78,410	126,452	65,818	270,680
2016	82,757	143,715	79,857	306,329
2017	86,306	162,406	98,004	346,716
2018	89,976	174,354	125,607	389,937
2019	93,766	184,002	148,455	426,223
Totals	739,062	1,187,457	733,441	2,659,960

There is also provision for small grants to schools to allow them to use local solutions to address problems of children dropping out of school. Schools need small amounts of money in order to implement activities identified in the School Learning improvement Plan to improve retention. This is to allow for local solutions to solve access problems.

The assumption made here is that K10,000 will be sent to each district from the Department of Education in the first year for these activities and that this will increase by K10,000 each year. The amount of the school grants is expected to increase gradually as districts and schools can provide assurances of adequate acquittal and procurement procedures being in place and schools can provide school plans.

Table 37 shows the grants to the districts for primary schools over the period 2010 to 2019

Table 37. Grants to Districts for Primary Schools, 2010-2019

Year	Grants to Primary Schools K'000s
2010	0
2011	951
2012	1,935
2013	2,953
2014	4,005
2015	5,092
2016	6,217
2017	7,380
2018	8,583
2019	9,826
Total	46,942

5.2.2 Advocacy and Raising Awareness on Basic Education

This is for the development, production and delivery of advocacy- and awareness materials. The campaigns will be delivered in the three years leading up to the target date for all 6- year old children to be enrolled in schools.

Table 38 shows all the budgeted cost related to advocacy and awareness raising activities during the period 2010-2019.

Table 38. Advocacy and Awareness Raising, 2010-2019

Year	Production of Materials K'000s	Delivery of Campaign K'000s	Totals K'000s
2010	5,970	4,653	10,623
2011	6,173	4,812	10,985
2012	6,383	4,975	11,358
2013			
2014			
2015			
2016			
2017			
2018			
2019			
Totals	18,526	14,440	32,966

5.2.3 Provision of Water and Sanitation Facilities in All Schools

Table 39 shows the cost involved for the provision of adequate drinking water and sanitation facilities in all schools. If all of the classrooms that are built have water tanks attached then statistically, there will be no need to provide new water tanks separately. However, this will have to be monitored on a district by district and even school by school basis.

Table 39. Provision of Water and Sanitation Facilities, 2010-2019

Year	New Toilets K'000s	New Water Tanks K'000s	Toilet Replacement K'000s	Totals K'000s
2010	593		5,849	6,442
2011	794		6,048	6,842
2012	1,884		6,253	8,137
2013	980		6,466	7,446
2014	1,139		6,686	7,825
2015	3,082		6,913	9,995
2016	1,225		7,148	8,373
2017	1,316		7,391	8,707
2018	273		7,642	7,915
2019	274		7,902	8,176
Totals	11,560	0	68,298	79,858

Table 40 provides a summary of all cost for the enhanced retention interventions.

Table 40. Total Costs for Enhanced Retention Interventions, 2010-2019

Year	Subsidies K'000s	School Grants K'000s	Advocacy Campaigns K'000s	Water and Sanitation K'000s	Totals K'000s
2010	138,019	0	10,623	6,442	155,084
2011	159,080	951	10,985	6,841	177,857
2012	182,163	1,935	11,358	8,138	203,594
2013	206,638	2,953		7,446	217,037
2014	234,175	4,005		7,824	246,004
2015	270,680	5,092		9,995	285,767
2016	306,329	6,217		8,373	320,919
2017	346,716	7,380		8,707	362,803
2018	389,937	8,583		7,916	406,436
2019	426,223	9,826		8,176	444,225
Totals	2,659,960	46,942	32,966	79,858	2,819,726

5.3 Quality of Education Improved

There are budgets identified for the first five of the six inter-linked outputs to achieve improved quality of education. These are:

- 5.3.1 Pre-service basic education teacher training
- 5.3.2 In-service teacher training for all basic education teachers
- 5.3.3 Provision of education materials to all elementary and primary levels
- 5.3.4 Library development and maintenance
- 5.3.5 Maintenance of all elementary and primary schools

5.3.1 Pre-Service Basic Education Teacher Training

The costs are split into the institutional and the mixed mode delivery. Table 40 shows the cost for the elementary pre-service Teacher Education. The infrastructure costs include the classrooms and boarding accommodation required for the programme to be delivered entirely in institutions.

Table 41. Elementary Pre service Teacher Education, 2010-2019

Year	Recurrent K'000s	Infra- structure K'000s	Totals K'000s
2010	14,564	12,830	27,394
2011	17,303	8,844	26,147
2012	18,099	9,145	27,244
2013	18,055	0	18,055
2014	14,329	0	14,329
2015	11,817	0	11,817
2016	10,339	0	10,339
2017	10,266	0	10,266
2018	10,385	56	10,441
2019	10,583	58	10,641
Totals	135,740	30,933	166,673

The primary pre service teacher education budget includes the costs for running the primary school teacher colleges as well as taking over the scholarships for teachers from remote areas and for the extra classrooms and dormitories required. Table 42 shows the primary pre-service teacher education cost.

Table 42. Primary Pre-service Teacher Education, 2010-2019

Year	Recurrent K'000s	Infra- structure K'000s	Totals K'000s
2010	27,138	0	27,138
2011	28,033	4,975	33,008
2012	32,412	13,203	45,615
2013	43,204	10,638	53,842
2014	53,111	5,805	58,916
2015	59,708	11,373	71,081
2016	70,900	7,775	78,675
2017	79,500	0	79,500
2018	82,103	0	82,103
2019	84,786	0	84,786
Totals	560,895	53,769	614,664

5.3.2 In-Service Basic Education Teacher Training

The in-service training provision as shown in table 43 is over and above than at present provided through the Department of Education and supported by donor partners.

Table 43. In-Service Training Cost, 2010-2019

Year	Elementary In Service Training K'000s	Primary In Service Training K'000s	Leadershi p Programm e K'000s	Totals K'000s
2010	1,693	2,416	1,283	5,392
2011	1,934	2,505	1,327	5,766
2012	2,155	2,621	1,372	6,148
2013	2,358	2,762	1,418	6,538
2014	2,534	2,999	1,467	7,000
2015	2,708	3,337	1,516	7,561
2016	2,859	3,710	1,568	8,137
2017	2,982	4,138	1,621	8,741
2018	3,108	4,667	1,676	9,451
2019	3,239	5,163	1,733	10,135
Totals	25,570	34,318	14,981	74,869

5.3.3 Provision of Education Materials

Table 44 shows figures that include both the Government commitment to the supply of text books for elementary and primary schools and the European Union's programme that will provide books for the primary schools only. The funds are for both the procurement and the distribution of the books.

Table 44. Text Book Supply and Re-supply, 2010-2019

Year	Elementary Costs K'000s	Primary costs K'000s	Totals K'000s
2010	17,914	832	18,746
2011	1,069	1,077	2,146
2012	1,215	24,669	25,884
2013	6,043	25,521	31,564
2014	6,757	28,164	34,921
2015	7,288	34,069	41,357
2016	7,217	36,150	43,367
2017	7,519	41,335	48,854
2018	7,831	45,650	53,481
2019	8,153	50,555	58,708
Totals	71,006	288,022	359,028

5.3.4 Library Development and Maintenance

Table 45 shows the costs of both of library facilities and the library books themselves. Many schools throughout the country both in urban and rural areas do not have proper library storage facilities. School authorities will take full responsibility in ensuring that these are provided for better learning. A portion of the school subsidy could be earmarked to fund the construction of school libraries.

Assumptions are that:

- the 1,000 largest schools will require a dedicated library costing K60,000
- Smaller schools will require a library/office facility costing K20,000
- Initial collection costs will be K20,000, and that
- Maintaining collections will cost K20 per child per annum

Table 45. School Library Facilities and Books, 2010-2019

Year	Infra-structure Costs K'000s	Initial Supply of Books K'000s	Recurrent Costs of Maintaining Collections K'000s	Totals K'000s
2010	0	15,396	0	15,396
2011	24,763	15,919	14,536	55,218
2012	25,605	16,461	15,401	57,467
2013	26,476	17,020	16,392	59,888
2014	27,376	17,599	17,844	62,819
2015	28,307	18,197	20,274	66,778
2016	0.0	0	23,163	23,163
2017	0.0	0	26,582	26,582
2018	0.0	0	30,238	30,238
2019	0.0	0	33,514	33,514
Totals	132,527	100,592	197,944	431,063

5.3.5 Maintenance of Elementary and Primary Schools

Maintenance costs as shown in table 46 are based upon those in the Unit Costs Model and are K 19 and K 56 per child per annum for elementary and primary respectively. It has been assumed that the maintenance funds will come from the District Services Improvement Programme and these have been phased in so that the Local-level Governments will provide the full amount in three years.

Table 46. Maintenance and Upgrading Cost, 2010-2019

Year	Elementary School Maintenance K'000s	Primary School Maintenance K'000s	Classroom upgrading K'000s	Totals K'000s
2010	9,853	39,285	17,962	67,100
2011	11,583	40,702	25,537	77,822
2012	12,898	43,124	33,607	89,629
2013	14,109	45,897	42,196	102,202
2014	15,161	49,964	51,330	116,455
2015	16,200	56,767	53,075	126,042
2016	17,098	64,856	54,880	136,834
2017	17,832	74,430	56,746	149,008
2018	18,590	84,666	58,675	161,931
2019	19,373	93,838	60,670	173,881
Totals	152,697	593,529	454,678	1,200,904

Table 47 provides a summary of all cost for the improved quality of education interventions.

Table 47. Total Costs Improved Quality of Education Interventions, 2010-2019

Year	Elementary Pre-service Training K'000s	Primary Pre-service Training K'000s	In-Service Training K'000s	Textbook Supply and Re-supply K'000s	School Libraries K'000s	School Maintenance & Upgrading K'000s	Totals K'000s
2010	27,394	27,138	5,392	18,746	15,396	67,100	161,166
2011	26,147	33,008	5,766	2,146	55,218	77,822	200,107
2012	27,244	45,615	6,148	25,884	57,467	89,629	251,987
2013	18,055	53,842	6,538	31,564	59,888	102,202	272,089
2014	14,329	58,916	7,000	34,921	62,819	116,455	294,440
2015	11,817	71,081	7,561	41,357	66,778	126,042	324,636
2016	10,339	78,675	8,137	43,367	23,163	136,834	300,515
2017	10,266	79,500	8,741	48,854	26,582	149,008	322,951
2018	10,441	82,103	9,451	53,481	30,238	161,931	347,645
2019	10,641	84,786	10,135	58,708	33,514	173,881	371,665
Totals	166,673	614,664	74,869	359,028	431,063	1,200,904	2,847,201

5.4 Basic Education Management Improved

There are budgets identified for the five inter-linked outputs to achieve enhanced basic education management. These are:

- 5.4.1 Training of Headteachers on administration, finances and general management
- 5.4.2 Technical and planning support for District Education Administrators
- 5.4.3 Support to standards officers to allow them to visit schools
- 5.4.4 Support for the work of the provincial and national education authorities
- 5.4.5 Research studies to be conducted

5.4.1 Training of Headteachers on Administration, Finances and General Management.

These programmes will be carried out using the teacher In Service Plan mode. This will involve a series of workshops held provincially to train the Headteacher of the base school in each of the clusters. There are approximately 900 clusters around the country and these workshops will in the region of K 50,000 each. The 900 Headteachers will then be expected to run similar courses for the Headteachers in their own clusters. These are estimated to cost an average of K1,000 each.

The costings in table 48 also include annual repeat workshops for newly appointed Headteachers. It is assumed that 20% of Headteachers are replaced each year although this figure still needs to be verified.

Table 48. Training of Headteachers, 2010-2019

Year	Financial and Asset Management Training K'000s	Personnel Management Training K'000s	Totals K'000s
2010	508	508	1,016
2011	525	525	1,050
2012	217	217	434
2013	225	225	450
2014	232	232	464
2015	240	240	480
2016	248	248	496
2017	257	257	514
2018	265	265	530
2019	274	274	548
Totals	2,991	2,991	5,982

5.4.2 Technical and Planning Support to District Education Administrators

District Education Plans are currently being developed with support from the Department and further support will be provided to the District Education Administrators to provide them with the tools that they require to successfully implement their tasks.

First there will be support to ensure that the District Education Plans are consistent with the District Development Plans, and which are required as a precursor to the release of funds from the District Services Improvement Grant. This support will take the form of workshops for all District Education Administrators and will build upon work already being carried out. Church Education Secretaries will be included in these workshops when their attendance is appropriate.

Secondly the District Education Administrators will be provided with equipment and funds that they require to do their work according to their job descriptions.

Table 49. Support to District Education Administrators, 2010-2019

Year	DEA Planning Workshops K'000s	Grants for DEA Travel K'000s	Computers and Training K'000s	Totals K'000s
2010	321	952	0	1,273
2011	0	984	0	984
2012	0	1,017	0	1,017
2013	0	1,052	0	1,052
2014	0	1,088	978	2,066
2015	0	1,125	0	1,125
2016	0	1,163	0	1,163
2017	0	1,203	0	1,203
2018	0	1,243	0	1,243
2019	0	1,286	0	1,286
Totals	321	11,113	978	12,412

5.4.3 Support to School Inspectors

Table 50 shows the travel funds to be provided to allow School Inspectors to carry out their work.

Table 50. Support to School Inspectors, 2010-2019

Year	Inspector Travel K'000s
2010	642
2011	663
2012	686
2013	709
2014	733
2015	758
2016	784
2017	811
2018	838
2019	867
Total	7,491

5.4.4 Support for the Provincial and National Education Authorities

The support will take the form of capacity building activities for provincial and national education planning officials at both the national and the regional levels and for which the cost are shown in table 50. Church Education Secretaries will be included in these workshops when their attendance is appropriate.

Table 51. Capacity building for Provincial and National Education Authorities, 2010-2019

Year	Capacity Building for Provincial Planners K'000s	Regional Capacity Building Activities K'000s	Totals K'000s
2010	214	428	642
2011	221	442	663
2012	229	457	686
2013	236	473	709
2014	244	489	733
2015	253	505	758
2016	261	523	784
2017	270	540	810
2018	279	559	838
2019	289	578	867
Totals	2,496	4,994	7,490

5.4.5 Research Studies to be Conducted

The support will take the form of funds being made available for the Department to carry out research studies in order to inform policy development. The exact nature of the research topics to be covered will be determined on an annual basis but an indication of the types of studies are outlined in section 4.4.5.

Table 52 gives a summary of the anticipated costs for research studies

Table 52. Total Costs for Research Studies, 2010-2019

Year	Research Costs K'000s
2010	1,069
2011	1,105
2012	1,143
2013	1,182
2014	1,222
2015	1,264
2016	1,307
2017	1,351
2018	1,397
2019	1,445
Total	12,485

Table 53 provides a summary of all cost for the improved basic education management interventions.

Table 53. Total Costs for Improved Basic Education Management Interventions, 2010-2019

Year	Headteacher Training K'000s	Support for DEAs K'000s	Support for Inspectors K'000s	Support for Provincial & National Authorities K'000s	Research Costs K'000s	Totals K'000s
2010	1,016	1,273	642	642	1,069	4,642
2011	1,050	984	663	663	1,105	4,465
2012	434	1,017	686	686	1,143	3,966
2013	450	1,052	709	709	1,182	4,102
2014	464	2,066	733	733	1,222	5,218
2015	480	1,125	758	758	1,264	4,385
2016	496	1,163	784	784	1,307	4,534
2017	514	1,203	811	810	1,351	4,689
2018	530	1,243	838	838	1,397	4,846
2019	548	1,286	867	867	1,445	5,013
Totals	5,982	12,412	7,491	7,490	12,485	45,860

5.5 Equity Enhanced

The only specific enhanced equity intervention that requires a separate budget is the one relating to special needs education.

5.5.1 Gender

As has been seen earlier there are not huge differences in terms of gender at the basic education level. The more significant differences are in the post primary and tertiary sectors of education.

It is hoped that many of the strategies outlined earlier will help in closing whatever the gender gap in terms of education opportunities. In particular, the strategy related to water and sanitation is designed specifically to attempt to keep girls in school. There will be a number of other strategies developed in order to achieve this and these will include the establishment of gender focal points in all provincial education administrations.

5.5.2 Provision of Special Needs Education

An extensive study is required to determine the actual status of the needs for special education so that appropriate programmes can be further developed and funded.

Table 54 gives the estimated special needs education requirements for the period 2010 to 2019.

Table 54. Special Needs Education Requirements, 2010-2019

Year	Study K'000s	Salaries K'000s	Operational Costs K'000s	Totals K'000s
2010	535	2,594	1,038	4,167
2011	553	2,840	1,136	4,529
2012	0	3,107	1,243	4,350
2013	0	3,396	1,359	4,755
2014	0	3,710	1,484	5,194
2015	0	4,051	1,620	5,671
2016	0	4,420	1,768	6,188
2017	0	4,820	1,928	6,748
2018	0	5,133	2,053	7,186
2019	0	5,467	2,187	7,654
Totals	1,088	39,538	15,816	56,442

5.5.3 HIV/Aids

Though HIV/Aids campaigning will require considerable inputs, both in technical advisory as well as financial terms, the funding required is not UBE specific and is therefore not included in this Plan

5.5.4 Most Vulnerable Children

No separate budget is allocated for the support to the most vulnerable children, as the anticipated results will be achieved through a better coordination and cooperation between the various responsible agencies.

5.5.5 Provision for Remote Schools and Over-crowded schools

All of the schools in the country will benefit from the infrastructure interventions outlined earlier in this plan. There has to be a recognition however that extra efforts, and costs, will be involved in implementing these strategies in both the most remote parts of the country and also the major urban centres. Table 55 below simply provides indicative figures for supporting these schools.

Table 55. Remote and Over-crowded Schools Requirements, 2010-2019

Year	Remote Schools K'000s	Over- crowding K'000s	Totals K'000s
2010	1,069	1,069	2,138
2011	1,105	1,105	2,210
2012	1,143	1,143	2,286
2013	1,182	1,182	2,364
2014	1,222	1,222	2,444
2015	1,264	1,264	2,528
2016	1,307	1,307	2,614
2017	1,351	1,351	2,702
2018	1,397	1,397	2,794
2019	1,444	1,444	2,888
Totals	12,484	12,484	24,968

In addition to this a series of measures will be put in place to ensure that the most remote schools in the country have an adequate number of teachers each year. These measures will include both financial and non financial incentives.

Table 56 gives the total budgeted costs for equity interventions.

Table 56. Total Costs for Equity Interventions, 2010-2019

Year	Special Needs Education K'000s	Remote and Over-crowded Schools K'000s	Totals K'000s
2010	4,167	2,138	6,305
2011	4,529	2,211	6,740
2012	4,350	2,286	6,636
2013	4,755	2,364	7,119
2014	5,194	2,444	7,638
2015	5,671	2,527	8,198
2016	6,188	2,613	8,801
2017	6,748	2,702	9,450
2018	7,186	2,794	9,980
2019	7,654	2,889	10,543
Totals	56,442	24,968	81,411

Table 57 provides a summary of all the costs related to identified interventions to achieve UBE.

Table 57. Total Costs for all Interventions to Achieve UBE, 2010-2019

Year	Access Improved K'000s	Retention Enhanced K'000s	Quality Improved K'000s	Management Improved K'000s	Equity K'000s	Totals K'000s
2010	37,294	155,084	161,166	4,642	6,305	364,491
2011	75,475	177,857	200,107	4,465	6,740	464,644
2012	122,064	203,594	251,987	3,966	6,636	588,247
2013	181,656	217,037	272,089	4,102	7,119	682,003
2014	230,478	246,004	294,440	5,218	7,639	783,779
2015	238,378	285,767	324,636	4,385	8,198	861,364
2016	268,920	320,919	300,515	4,534	8,801	903,689
2017	203,809	362,803	322,951	4,689	9,450	903,702
2018	216,096	406,436	347,645	4,846	9,980	985,003
2019	141,258	444,225	371,665	5,013	10,543	972,704
Totals	1,715,428	2,819,726	2,847,201	45,860	81,411	7,509,626

5.6 Salaries and Secondary Benefits

There are two main components of the packages provided to teachers: their basic salaries and their leave fares.

5.6.1 Salaries

Teacher emoluments comprise the largest part of the education budget. Table 58 shows in millions of Kina the cost of teacher emoluments. The rise in salaries would normally be expected to be comparatively small in the early years of the plan because of the expansion is at the elementary level where salary levels are at their lowest. This is not however the case for two reasons. First, salaries for all teachers are expected to rise by a total of 7% over the years 2008 to 2010. These increases have been taken into account in this table. Second, it has been assumed that the elementary teachers will have a significant rise in pay over- and beyond the 7% that has been granted to all teachers. This is a result of an expected National Executive Council decision to lengthen the elementary school teaching day to the same as for primary school teachers.

Table 58. Teacher Salaries, 2010-2019

Year	Elementary Teachers K'000s	Primary Teachers K'000s	Totals K'000s
2010	115,566	360,584	476,150
2011	136,071	384,315	520,386
2012	156,125	412,932	569,057
2013	175,829	446,731	622,560
2014	194,278	497,474	691,752
2015	213,402	567,459	780,861
2016	231,402	646,347	877,749
2017	247,731	738,172	985,903
2018	258,927	832,495	1,091,422
2019	270,528	920,962	1,191,490
Totals	1,999,859	5,807,471	7,807,330

5.6.2 Leave Fares

Leave fares are an entitlement for all non-elementary school teachers and so only apply for primary school teachers. These are calculated at 5% of total salary as shown in table 59.

Table 59. Leave Fares Cost, 2010-2019

Year	Primary K'000s
2010	18,029
2011	19,216
2012	20,647
2013	22,336
2014	24,874
2015	28,373
2016	32,317
2017	36,909
2018	41,625
2019	46,048
Total	290,374

5.7 Department and Provincial Administrative Costs

The costs of administering the system at both the national and the provincial level is over- and above the costs already outline in this plan. Table 60 shows the budget that the DoE and the provinces require to administer the whole national education system, -not just basic-, and to carry out their core functions.

Table 60. DoE and Provincial Administrative Requirements, 2010-2019

Year	DoE K'000s	Provincial Admin K'000s	Totals K'000s
2010	53,209	20,420	73,629
2011	57,920	25,345	83,265
2012	62,451	30,661	93,112
2013	66,991	32,875	99,866
2014	72,288	35,352	107,640
2015	79,347	38,755	118,102
2016	87,168	42,492	129,660
2017	96,028	46,576	142,604
2018	105,995	46,576	152,571
2019	115,103	46,576	161,679
Totals	796,500	365,628	1,162,128

The costs shown here provide for salaries for additional staff in order to adequately implement and monitor this Plan. In particular, it will provide for UBE champions in key divisions and enhanced staffing in the critical areas administering the Education Management Information System and monitoring and evaluation systems.

5.8 Total Costs

Table 61 gives an overview of all the cost for the UBE implementation.

Table 61. All Cost for UBE plan Implementation

Year	UBE Interventions K'000s	Salaries K'000 s	Leave Fares K'000s	Admin. Requirements K'000s	Totals K'000s
2010	364.491	476.150	18.029	73.629	932.299
2011	464.644	520.386	19.216	83.265	1.087.511
2012	588.247	569.057	20.647	93.112	1.271.063
2013	682.003	622.560	22.336	99.866	1.426.765
2014	783.779	691.752	24.874	107.640	1.608.045
2015	861.364	780.861	28.373	118.102	1.788.700
2016	903.689	877.749	32.317	129.660	1.943.415
2017	903.702	985.903	36.909	142.604	2.069.118
2018	985.003	1.091.422	41.625	152.571	2.270.621
2019	972.704	1.191.490	46.048	161.679	2.371.921
Totals	7,509,626	7,807,330	290,374	1,162,128	16,769,458

CHAPTER 6 FINANCING OF UBE

6.1 UBE Financing Gap

The previous chapter provided the best estimates of the cost of making a genuine and concerted effort toward achieving UBE in PNG. When those costs are set against the likely level of funding it is clear that a substantial UBE funding gap would exist.

There will be a considerable funding gap between 2010 and 2015 if UBE is to be achieved. Accordingly, a genuine drive towards UBE in PNG, while maintaining other service delivery, is substantially beyond the sustainable funding capabilities of the PNG public sector. It is not expected that the Liquefied Natural Gas Project will yield material additional revenue within the UBE Plan period. Even if production comes on stream before 2015, it will take a number of years before the project is generating regular and sizable tax revenues.

Options to lower the UBE funding gap will be considered separate to this report, as a part of a whole of Government consideration of the 2010 Budget in consultation with the donor partners.

6.2 Existing Funding

Provincial Governments

There is evidence that Provincial Governments have not been effective at spending funds allocated through them for education services. Generally speaking excessive funding of administrative costs means that priority areas tend to lose out with education on average receiving only 49% of what was needed in 2007¹. If this situation can be improved additional recurrent funding could be released for education purposes.

Provincial Governments have three sources of funding: Internal collections of revenues (including Goods and Services Tax); conditional and function grants from National Government and the ability to borrow. Borrowing when prospective returns exceed the cost of borrowing is justifiable but in the case of education, returns to the Provincial Government are unlikely to fit the bill and in any case domestic financial markets lack the required depth.

The "Intergovernmental Funding Bill²", which would govern amounts of grant funding would require Provincial Governments to introduce and fund Minimum Priority Activities in education as well as sets out clear conditions of use of Function Grants and incidence of responsibility for funding service delivery between tiers of government. The strict application of inland Goods and Services Tax sharing arrangements means that from 2009 onwards Provincial Governments will receive no more than 60% rebated as Goods and Services Tax with any balance rebated as Function Grants. These reforms released an additional K10 m as Education Function Grants across all Provinces in 2009 - a significant amount of funding but relatively insignificant against the UBE funding gap.

Provincial Governments are already to receive more from the National Government in form of Education Function Grants. With a successful reallocation of funding within Provincial Governments, away from administration and toward priority sectors more resources may be found but they will take some time to emerge and will be relatively small compared to the size of resources required.

Grant and transfers from National Government sources account for almost 80% of total transfers to Provincial Governments. Scope for this behaviour is limited though as a large part of funding comes from National Government recurrent budget grants (49.5%).

¹ National Economic and Fiscal Commission – “Closing the Gap”, Review of all Expenditure in 2007 by Provincial Governments

² The Bill has not been passed into statute to date

Districts and LLGs:

Districts and local level governments have little more by way of financial resources than what is transferred to them by other tiers of government. Recurrent services grants from National Government go to rural and urban Local-level Governments to support service provision totalling K42m across 89 districts in 2008.

The District Services Improvement Programme is a one-off initiative made possible by the buoyant tax revenues in recent years. Though it could be a useful source of funding for expenditures at the local level it would be unsustainable and successor financing would need to be ready to take over. In total K14m was appropriated to each district of which the guidelines showed that K1m should be spent on education per district. There may be more available through the amounts allocated for community programmes and community infrastructure. There are considerable amount of funds available in the government budget system and this includes money allocated to MPs for development in their respective electorates. Unfortunately, it might be difficult to convince all 89 MPs and Joint District Budgeting and Planning Committees that this would be the best use of their allocations.

Members District Support Grants. District Members of Parliament are allocated K 1,000,000 a year half of which is allocated by the Joint District Budgeting and Planning Committees chaired by the Member. The other half is allocated at the Member's discretion, though all funds are to be acquitted. There may be some scope for earmarking some of this to UBE initiatives.

Table 62 below provides a basic analysis of costs and a possible funding gap. A few points need to be taken into account. First, the costs are for the whole of the education system not just elementary and primary education. Second, the funding availability is taken from Treasury projections and some of the other sources of funding are left constant whilst the costs have an inflator applied to them. Third, the funds availability does not reflect anything of the GoPNG long term commitment to Universal Basic Education or the possible benefits to be derived from the proposed LNG Project.

Table 62. Funding Required by Source, Funding Available, and the Gap

Year	National K'000s	Province K'000s	Dist / LLG K'000s	Parents K'000s	Totals K'000s	Funds Available K'000s	Gap K'000s
2010	1,112,535	60,565	108,970	168,046	1,450,116	1,212,348	237,768
2011	1,185,517	71,050	138,033	164,215	1,558,815	1,249,428	309,387
2012	1,290,165	98,616	181,108	157,386	1,727,275	1,242,847	484,428
2013	1,413,187	80,611	241,568	151,738	1,887,104	1,284,798	602,306
2014	1,559,449	109,667	304,179	146,366	2,119,661	1,328,377	791,284
2015	1,747,491	121,292	322,550	141,895	2,333,228	1,374,277	958,951
2016	1,893,487	142,815	372,272	144,537	2,553,111	1,402,962	1,150,149
2017	2,108,200	218,474	332,089	148,295	2,807,058	1,463,073	1,343,985
2018	2,329,654	297,337	367,894	157,826	3,152,711	1,532,397	1,620,314
2019	2,555,247	252,876	314,704	180,159	3,302,986	1,618,202	1,684,784
Totals	17,194,932	1,453,303	2,683,367	1,560,463	22,892,065	13,708,709	9,183,356

CHAPTER 7 MANAGEMENT AND IMPLEMENTATION

7.1 Introduction

The implementation of the UBE Plan will to a large extent depend on the efficacy of the DoE's various management, administrative and support systems, and structures at all the levels of service delivery: national, provincial, district and school levels. The focus for the implementation of this UBE plan will be at the school level and all management initiatives will be guided by this principle. It is intended that full use will be made of the church education agency staff.

The institutional framework within which this plan is implemented ultimately determines the prospects of its success. Following the analysis in section 2.9, the planned interventions described in section 4.4 aim at strengthening the management systems and structures at all levels in order to provide for the overall framework within which the education sector will function effectively and efficiently.

7.2 National Management and Administration

The role of the DoE is to provide a coordinating mechanism for provincial activities. There will be UBE "champions" in the key divisions of the Department who will report to the Implementation and Monitoring Group. The Implementation and Monitoring Group will take an overseeing role and report directly to DoE's Top Management Team.

The Department will continue to strengthen the four regional centres that will become the focus of support for the provinces. The Strategic Planning and Monitoring Advisors will be based in these centres as will other technical expertise that is required.

Some of the specific tasks that will need to be carried out by the DoE are:

- The overall coordination, monitoring and funding of the UBE Plan through existing structures;
- The establishment of a cadre of officers responsible for particular aspects of UBE in key divisions of the Department coordinated through the Policy and Planning Wing of the Department. These divisions and indicative key functions to be performed include:
 - Policy, Planning and Research in the planning and monitoring sections to, *inter alia*, develop standardised reporting formats for use at the sub-national levels and school levels;
 - Teacher education for teacher upgrading, the implementation of refresher courses for those teaching the over age-children and the implementation of courses to provide headteachers with the skills required to implement their School Learning Improvement Plans;
 - Curriculum Development and Assessment Division to provide support for the Curriculum Standards Monitoring Test, support for development of a process for the re-supply of text books, and curriculum development for those out-of-age children who still require a basic education;
 - Finance and Budgets to support schools establishing systems for budget planning, acquittal and financial reporting;
 - Standards and Guidance to continue the development of the School Learning Improvement Plans.
- To provide a pool of funds for technical assistance to the DoE and to be spent based upon strict agreed guidelines and criteria. The areas of technical assistance could include financial management, educational planning and management and education management information systems.

In order to improve the financial management at the national and provincial levels, the following actions will be taken:

- The accounting department to be fully staffed with appropriately qualified people to perform its core functions of processing, recording and reconciling financial information;
- All key reconciliations are being brought up-to-date and are completed on a monthly basis (bank reconciliations-particularly the main drawing account, Treasury Management System (TMS) to Public Government Accounting System (PGAS) reconciliations, and payroll reconciliations);
- The internal audit function is fully staffed with appropriately qualified people to implement the new risk based internal audit strategy and work programme.

In the area of procurement the following issues will be addressed:

- The centralisation of procurements within DoE in line with the 2007 DoE restructure;
- Development use of standard bidding documents.
- Training for Procurement staff in the DoE Corporate Services Division.

The weaknesses in DoE procurement systems identified by the procurement assessment highlight the critical need to strengthen these same systems. Stronger procurement systems promote a more efficient use of public resources and reduce the risks of corruption, which in turn increases the funding available to achieve progress towards UBE.

7.3 Provincial Management and Administration

The role of the province is to provide a coordinating and supporting mechanism for the work being undertaken in the districts. This will be led by the Provincial Education Planner who will be responsible to the Provincial Education Advisor and the Provincial Education Board.

The primary responsibility of the Provincial Education Planner is to plan for and monitor UBE development in the province and to support the District Education Administrator in their work at the school level.

Some of the specific tasks that will be required from the Provincial Education Planners are:

- To provide regular monitoring reports on the progress of UBE to the Provincial Education Board and to the DoE;
- To coordinate the facilities development with systems developed with the Department in recent years;
- To assemble all enrolment and staffing data from the districts on an annual basis and to submit to the DoE for census purposes;
- To analyse all census data and to prepare-, and submit reports to the Provincial Education Board;
- To provide a pool of funds for technical assistance to the Provincial Administration and to be spent based upon strict agreed guidelines and criteria. The needs will be defined at the provincial level.

The provincial staff will require continuous support to build capacity in their monitoring and evaluation skills in order for the DoE to be ensured that accurate, timely and consistent reporting procedures are followed. Support will continue to be provided through regular meetings and visits. The districts may require more specialised support that can not be provided directly by the Provincial Education Planner. In particular, this may be in the areas of infrastructural development and financial procedures. In such cases provision will be made for technical assistance.

The large amount of infrastructural development to take place at the school level will be managed by the provinces utilising the existing systems where appropriate. The principles and the role of the Provincial Project Implementation Team will be continued although with a re-structured membership that includes a much stronger district representation. Provinces will be provided with the funds required in order to ensure that all districts are represented at the quarterly meetings.

The infrastructure to be constructed each year will be determined by the School Learning Improvement Plans. Inevitably, there will be greater demand for classrooms than there will be funding available. At the national level it has to be decided which provinces and districts are to be given priority. The individual Provincial Project Implementation Team will then in turn determine where these houses and classrooms are to be built and to ensure that there is an equitable distribution amongst the districts in the province.

The existing network of Project Managers will be used to manage these projects although it is expected that there will be extra support needed. This is expected to be in the areas of financial management issues and logistics. Some of the more technical support can be supplied by officers from the School Infrastructure and Maintenance Office. Systems established have to be flexible enough to adapt to changing needs.

7.4 District Management and Administration

The District Education Administrator will be the major player in the management of education at the district level. The District Education Administrator will be expected to report to the District Administrator and the Provincial Education Board through the Provincial Education Adviser. The District Education Administrator will be supported in these tasks by the School Inspectors or Standards Officers based in the districts.

The primary responsibility of the District Education Administrator is to plan for- and monitor education development in the district and to support the school communities in the implementation of their School Learning Improvement Plans. The District Education Plan will provide for the steady progress towards achieving goals and objectives. Most of the activities of the District Education Administrator will be supportive in nature and be to ensure that the schools have the tools necessary to be able to implement their plans.

Some of the specific tasks that will be required from the District Education Administrators are:

- Planning for the establishment of elementary and primary schools;
- To ensure that all schools submit accurate enrolment and staffing data to the DoE;
- Monitoring, evaluating and reporting on the District Education Plan and the School Learning Improvement Plans;
- Supporting the Headteachers in their roles through visiting schools;
- Conducting advocacy and awareness at district, school and community levels;
- Facilitating the training programme for Headteachers;
- Financial monitoring of school activities.

A training needs analysis will be conducted to identify exactly where the capacity gaps are amongst the District Education Administrators. This is absolutely critical to the successful implementation of the UBE plan. The gaps are likely to be in areas of financial management that will be filled either by training or by technical assistance from the Department of Education.

7.5 School Management and Administration

Implementation of the plan at school level will be driven by the three year School Learning Improvement Plans. The Headteacher and Board of Management will be responsible for reporting on School Learning Improvement Plan implementation and to act as the link between the school and the school community.

The primary responsibility of the school management will be to prepare rolling annual plans linked to the School Learning Improvement Plan to support access, retention and quality. These plans will include the following:

- Projections of enrolments and staffing requirements;
- Facility construction and maintenance programme;
- Professional development programme for the teachers in that school;
- Textbook and school materials procurement plan;
- Budget projections and sourcing of funds;
- Monitoring and reporting mechanisms to include annual reporting.

There is an existing legal framework which allows for the active participation of parents and citizens in the running of the schools. Parents and citizens are represented through the Boards of Management and also the Parents and Citizens Associations. If these entities are not operating properly then they need to be made effective in the discharge of their roles and responsibilities.

The Headteacher and the Board of Management will require a set of appropriate skills in order to be able to discharge these responsibilities. Some of these skills will already have been learnt as a part of training programmes run by the Basic Education Development Programme and as a part of the Teacher In Service Plan. Some of the specific skills that will be required by those at the school level are:

- Planning;
- Budgeting and expenditure management;
- Financial accountability;
- Procurement procedures;
- Contract management;
- Supervision of small scale construction and maintenance;
- Monitoring and evaluation.

A training package will be developed and delivered for all Headteachers and senior staff and will be in four basic modules as below:

- Plan development;
- Monitoring and evaluation of progress towards UBE, including reporting procedures;
- Financial management, including procurement, contracts, acquittals and book keeping;
- School management, including stock control, teacher management, Board of Managements.

These training programmes will be facilitated by the District Education Administrators supported by the Standards Officers who are based in the districts. To improve financial management at the school level the following actions will be taken with all stakeholders (Provinces, Districts, education agencies):

- Standardized financial reporting systems and templates to be used by all schools as well as an updated financial management and procurement manual;
- A financial management and procurement training programme for Headteachers and Board of Management representatives;
- A comprehensive school inspection/monitoring programme that is properly staffed and funded (potentially building on the current Standards Officers role) that ensures all schools including remote schools are visited regularly (those schools that demonstrate good financial management and accountability can be visited less frequently so that effort is directed where more assistance is required).

7.5.1 Provincial and District Education Structures

Many provinces are currently going through a process of restructuring and it is important that the extra workload required as a result of the implementation of this plan is taken into account when reviewing job descriptions, the level of the positions and the number of positions. In particular, there may be a need for staff to be redeployed to be responsible for the very important monitoring process that will have to be put in place. The implementation of these UBE strategies will comprise the bulk of the work of the District Education Administrators and, again, there may be need for extra support for these officers. Innovative processes will be considered to provide this support.

7.5.2 Teacher Management

Frequent teacher absenteeism in many schools throughout PNG is one of the biggest obstacles when it comes to providing quality teaching and learning in the classroom. A sever reduction in teacher pupil contact hours has a sever effect on the quality of education that children receive. One strategy to overcome this is to empower site leaders to deal with this issue at the school level. Site leaders will be supported in this by the Standards Officers, whose resources will be increased in line with the growth of the number of teachers in the system.

7.6 Consultative and Reporting Processes

Reporting and consultative mechanisms will need to be established at all levels of the system and where possible will build on existing structures. There needs to be a clear line of communication between the school, the district and through to the national level.

School level

The implementation of UBE strategies at the school level will be linked inextricably to the School Learning Improvement Plan of each school. There is a School Learning Improvement Plan Coordinator in each school whose role is to report to the Board of Management on School Learning Improvement Plan issues that will cover UBE strategies.

District level

The implementation of UBE strategies at the district level will be the responsibility of the District Education Administrator. It is critical that the District Education Administrator is closely involved with the workings of the Joint District Planning and Budget Priority Committee, the Executive Officer of which is the District Administrator. A committee should be formed within each district, to be chaired by the District Administrator and to include the District Education Administrator, Standards Officers, Headteacher and church agency representatives. The role of this committee will be to endorse implementation schedules, to determine district priorities and to report on a quarterly basis to the Provincial Education Board.

Province level

The District Education Administrators will report to the Provincial Education Planner who will be responsible for the coordination of the district implementation schedules. This will be done through quarterly meetings of all District Education Administrators. The Provincial Education Adviser will chair the planning committee of the Provincial Education Board and it is this group that will recommend implementation strategies and report to the Provincial Education Board. The Provincial Education Adviser will be required to report on progress towards achieving UBE to both the Provincial Administrator and the Department of Education.

Regional level

The Strategic Planning and Monitoring Advisers will be based at the four regional centres. It will be the role of this officer to support the provincial education planners to develop and implement strategies for achieving UBE. In the early years of implementation the Strategic Planning and Monitoring Advisers will be expected to identify areas of need and the regional centre will be the base for any external assistance that may be required. It is expected that there will some extra positions created on a short term contract basis for technical officials at the regional level.

National level

The Implementation and Monitoring Group, chaired by the First Assistant Secretary Standards, will comprise key Assistant Secretaries. This group will be supported by officers from the Division of Policy, Planning and Research and UBE champions from the core divisions of the Department. The role of the Implementation and Monitoring Group will be to monitor progress being made in achieving UBE at the sub national level, to identify impediments and to report to the Top Management Team of the Department of Education. The group will receive reports from the provinces and provide advise to the Secretary for Education.

CHAPTER 8 MONITORING AND EVALUATION

8.1 Monitoring

Effective monitoring and evaluation of implementation are critical for ensuring that UBE Plan objectives are attained within the targeted time frame.

The processes adopted will provide essential data to inform key decisions makers at all levels on the progress of implementation, the achievements and lessons learnt to allow them to set priorities and have an informed view of overall progress. Key indicators selected inform on current status, assess progress and identify gaps. It is essential that only a few key indicators are selected and used in implementation progress reports so that they are simple and easy to understand and use.

8.2 UBE Progress Indicators

There are two types of indicators; descriptive indicators that inform on current status and; causal indicators that can also be used to explain as a causal factor leading to the status of the descriptive indicator.

The UBE Plan has certain key description indicators that inform of current status. These include Admission Ratio, Cohort Completion Rate and the Enrolment Rate. The Grade Eight Exam Results will be used in the interim to inform on Quality of Learning. The Policy, Planning and Research Division will compile an annual report using these four indicators documenting the current status by national, provincial and district and also showing status by gender. This report will become a part of the Department of Education Annual Report. The geographical and gender status indicators inform on Equity Status, a key objective of the UBE Plan.

This report needs to be made available as widely as possible and to key decision makers particularly Members of Parliament who can see where their District stands in comparison to others and can then make decisions on the use of District Development grants to pursue key UBE objectives. District Administrators will see where their district stands compared to other districts and take appropriate measures including the review of their district UBE implementation plans to take their District forward. Schools within districts indicating slow progress may require support and attention in the review of their plans and strategies.

Output(s)	• Report on UBE Status by Key Indicators
Implemented by:	• GoPNG/DoE – PPR or contracted out to External Party
Activities	• Production of an Annual UBE Progress Report by Key Indicators
Input	• Government Funding
Indicator	• Annual report produced.
Reporting functions	• School Census data from Corporate Data and Curriculum Monitoring Test Results made available to PPR for production of report.

Secondly, the selection and use of Causal Indicators in monitoring reports could indicate status of implementation and could help to explain why UBE targets have been attained or not attained. These can be presented in such a way that it can be seen whether or not there has been any improvement in these indicators. They can also lead to further enhancements of the UBE descriptive (Objective) indicators. Causal relationships can sometimes be established between these indicators.

The Education Management Information Systems needs to be further strengthened in order to efficiently provide the indicators as required. The data collection system can be adjusted to collect additional data for development of an indicator as needed. The lists of indicators needed are outlined in section 8.6.

It requires the two key units to be supported and adequately funded in order to generate data and indicators for UBE Monitoring. The "Corporate Data Section" will take responsibility for generation of enrolment data and other data at school level. The other key unit is the "Measurement Services Unit" for development, administration and reporting of results of the Curriculum Monitoring Tests. This will be used for monitoring quality of teaching and learning.

8.3 UBE Plan Implementation Indicators

The Programme Implementation Unit would need to report on the implementation of the UBE Plan to senior management of DoE and other implementing agencies. There are various targeted outputs, inputs and indicators discussed from Chapter 4 of this plan that needs to be captured in a relevant reporting format to key managers on implementation status flagging areas for follow up where needed.

The Programme Implementation Unit needs to establish information gathering systems that provide the basis for the production of regular reports for management.

8.4 Financial Indicators

Financial monitoring tracks the financial information/data that relate to the allocated resources with a view to maintaining an account of how and where these are applied. Good quality financial monitoring is critical to the effective implementation of agreed UBE interventions and to accountability in the use of resources. Secondly, these processes would offer the assurance to both the GoPNG and other stakeholders that those resources targeted at education sector are being used for intended purposes.

Development Partners and other stakeholders that support the education sector are expected to increasingly rely upon the GoPNG financial reporting and monitoring systems. The Programme Implementation Unit's monitoring system shall be strengthened, focusing on:

- The improvement of the relevance and adequacy of the collected data;
- The timeliness and quality of processing, analysis and publication/dissemination;
- The utilization of impact monitoring results in policy-making and resource allocation.

In order to carry out effective monitoring of the UBE plan, a common performance assessment framework shall be agreed upon between GoPNG and all major stakeholders, including the development partners.

Effective monitoring and evaluation of implementation are critical functions of delivery. Firstly, these processes will provide essential data and insights for informed review of implementation processes, drawing lessons, priority setting and implementation adjustments. Secondly, these processes would offer the assurance to both the GoPNG and other stakeholders that those resources targeted at the education sector are being used for intended purposes.

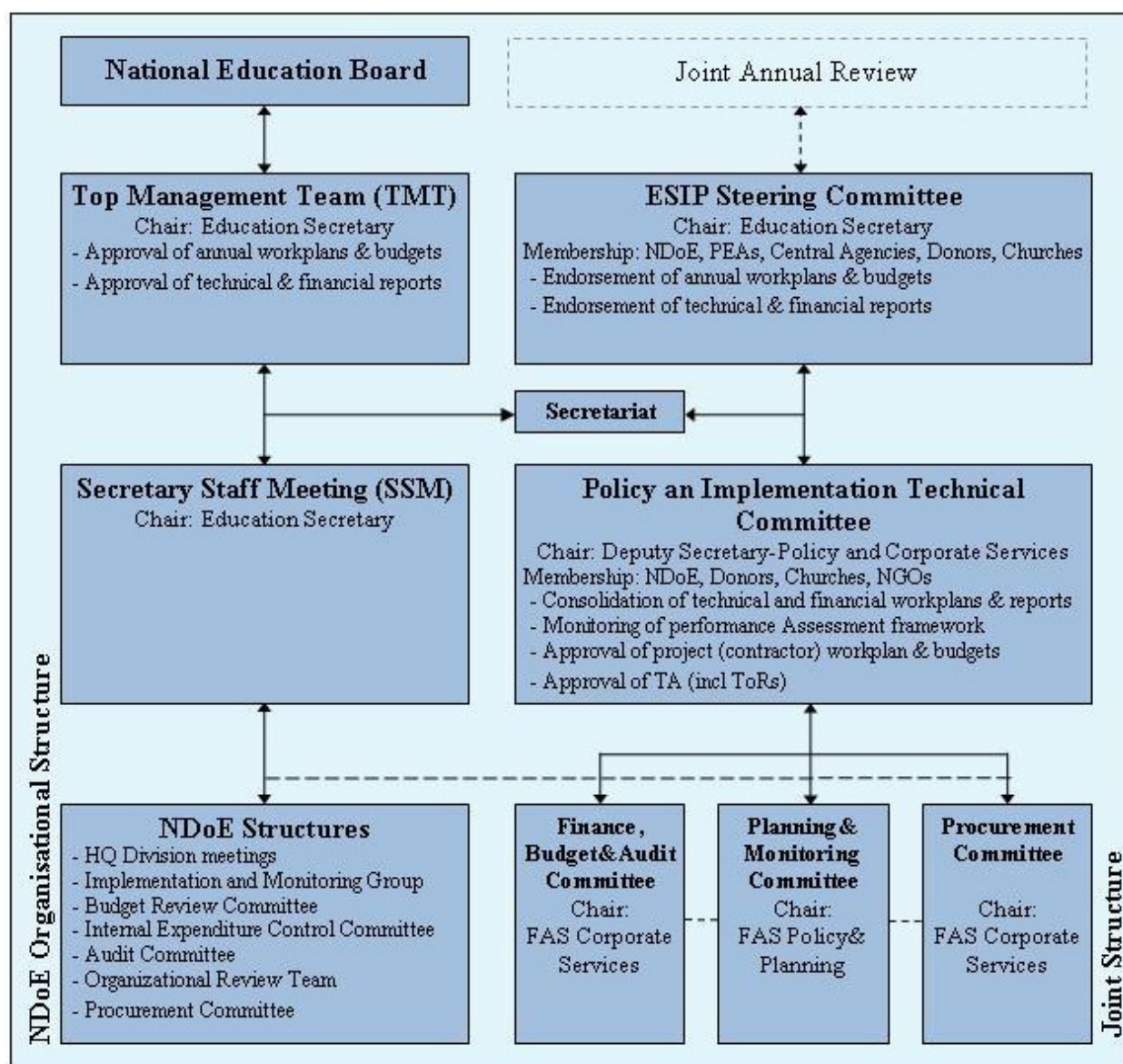
Financial monitoring tracks the financial information/data that relate to the allocated resources with a view to maintaining an account of how and where these are applied. Good quality financial monitoring is critical to the effective implementation of agreed UBE interventions and to accountability in the use of resources.

8.5 Performance Assessment Framework

Monitoring the progress and impact of the interventions will be done on a regular basis using various methods. Reporting requirements at sector and sub-national levels will feed into the overall national reporting system, thus requiring their timing to be synchronized with key national planning and budgeting cycles.

Figure 8 shows the inter-relations and responsibilities of the various stakeholders

Figure 8. DoE and Stakeholders Joint Monitoring Mechanisms



Development Partners and other stakeholders that support the education sector are expected to increasingly rely upon the GoPNG financial reporting and monitoring systems. The monitoring system shall be strengthened, focusing on

- The improvement of the relevance and adequacy of the collected data;
- The timeliness and quality of processing, analysis and publication/ dissemination;
- The utilization of impact monitoring results in policy-making and resource allocation.

In order to carry out effective monitoring of the UBE plan a common performance assessment framework shall be agreed upon between GoPNG and all major stakeholders, including the development partners.

The implementation of the UBE plan will be monitored through structured mechanisms and processes at all administrative levels based on agreed annual indicators and targets. A performance assessment framework will be developed including key performance indicators and targets to be monitored on an annual basis.

The key indicators are broken down into three broad categories: education, management and financial. The education indicators cover four education themes : access and participation, quality, efficiency, and equity. Under the UBE, the performance indicators will be used on an annual basis.

In arriving at these core indicators, the following principles were agreed:

- They adequately cover and describe the essential results and outputs in terms of the four themes above;
- They adequately cover the indicators agreed upon in the NEP, UBE Plan, Education for All, Millennium Development Goals and other multilateral and bilateral agreements;
- They form the basis for all reporting required internally (within the Department) and externally (within the government, the external funding agencies and internationally recognized reports).

In addition to the overall indicator, section 8.6 shows 25 indicators broken down into three separate sets: *education indicators* which are broken down into access/participation, efficiency, quality and equity; *management indicators* which cover provision of human resources, educational facilities and planning tools; and, *financial indicators* to cover the domestic expenditure devoted to education.

Due to international requirements certain levels will be measured that do not conform to the PNG education system (i.e. Grades 1-6). The levels of disaggregation have been defined along gender and geographic breakdowns. The data sources have been identified from where the data would be collected. An effort has been made to avoid complicated and costly data collection methods that are outside of the routine functions of the Department. Most of the data will be collected through the school reporting, inspector reporting, DEA reporting, annual school census (a revised version to include new indicators), population census and GoPNG Budget Statements.

The framework will be adapted to meet the needs at the various administrative levels (national, provincial, district and school). Baselines will be established and the targets for the plan will be developed for approval. A smaller "super" set (6-8 indicators from the different sub-sets) of indicators from the existing framework could be established that would form the basis for an independent/joint annual review that would be held with the relevant government agencies, development partners and non-state actors.

There will be a mid-term evaluation of the UBE Plan and one at the end of the plan period. The terms of reference for these evaluations will be as agreed to between the relevant stakeholders.

In addition, there will be Joint Annual Reviews with all relevant stakeholders, including non-state actors and the development partners. The evaluation system is going to be complementary to the monitoring system will assist in the determination of the degree to which the set targets and expected outcomes/impact are being achieved. Progress Reports on Current Status of key UBE Indicators and the UBE Plan Implementation Monitoring reports would be considered at these Annual Reviews along with any other relevant information as needed. Such reviews will provide the basis for taking any corrective measures or new interventions as required.

8.6 Overall Education Indicators

8.6.1 Education Indicators

	OUTCOME	INDICATOR	BASELINE 2007			TARGET 2019	ACTIVITIES	LEAD AGENCY
			Male	Female	Total			
A	ACCESS							
1	Every 6 year old child enrolled at elementary prep	Net Admission Rate	11.2%	11.9%	11.5%	100%	Establish sufficient schools	Districts
2	All children enrol at elementary prep.	Gross Admission Rate	80.7%	79.0%	79.8%	100%	Establish sufficient schools	Districts
B	RETENTION		Male	Female	Total			
3	A greater number of children remain in school to complete the primary cycle.	Retention Rate ³	45.8%	42.0%	44.1%	71%	Awareness Abolition of school fees	DOE
4	A greater number of children completing a full basic education.	Completion Rate	48.5%	41.8%	45.3%	77%	Awareness Abolition of school fees	DOE
5	All children have the opportunity to complete a full quality primary education of 6 years to Grade 8	Prep to Gr 8 Gross Enrolment Rate	75.3%	67.2%	71.3%	96%	Establish sufficient schools	Districts
6	All children have the opportunity to complete a full nine years of basic	Prep to Gr 8 Net Enrolment Rate	54.3%	51.4%	52.9%	85%	Establish sufficient schools	Districts

³ The retention rate is the number of children in Grade 8 as a percentage of those enrolled in either prep or Grade 1

	OUTCOME	INDICATOR	BASELINE 2007			TARGET 2019	ACTIVITIES	LEAD AGENCY
	education							
C	QUALITY		Male	Female	Total			
7	All children should reach a required standard of literacy, numeracy and general knowledge as prescribed in the curriculum.	Percentage of pupils who receive a satisfactory standard as measured by the Curriculum Standards Monitoring Test ⁴				TBD⁵	TBD	DOE
	All children should reach a required standard of literacy, numeracy and general knowledge as measured in the national Certificate of Basic Education Examination.	Percentage of pupils completing Grade 8 who receive a satisfactory passing mark in the national exams						
8	All schools supplied with relevant textbooks	Pupil Text Book Ratio (PTBR)	Not known			1:1	Text book supply	DOE – CDAD, Provinces
9	Effective monitoring of primary schools.	Percentage of schools receiving Standard Officers Visits Reports (SVR)	40%			80%	Reporting on schools	DOE – SGD
D	MANAGEMENT		Male	Female	Total			
10	Appropriately qualified teachers in all classrooms	Percentage of Primary School teachers with a	66.3%	71.6%	68.7%	100%	In Service and Pre Service Teacher	DOE - TED

⁴ Until such time as the CSMT is fully institutionalised the Grade 8 examination results will be used as a proxy

⁵ To Be Determined

	OUTCOME	INDICATOR	BASELINE 2007			TARGET 2019	ACTIVITIES	LEAD AGENCY
		diploma qualification					Education	
11	Effective use of resources	Pupil Teacher Ratio	33.1			34.3	Effective teacher position allocation	Provinces
12	All children taught in appropriately sized classes.	Percentage of primary school classes with more than 45 students⁶	10%			0	Effective teacher position allocation	Provinces
13	Effective planning and budgeting processes in place.	Percentage of provinces completing annual operational plans and budgets in line with approved plans	0%			100%	Support for Provincial education authorities	DOE - PPR
14	Removal as fees as a barrier to participation for all	Annual elementary school fee subsidy as a percentage of NEB maximum elementary school fee.	80%			100%	Abolition of school fees	DOE – F and B
15	Removal as fees as a barrier to participation for all	Annual primary school fee subsidy as a percentage of NEB maximum elementary school fee.	70%			100%	Abolition of school fees	DOE – F and B
16	Students being taught in a conducive environment	Percentage of elementary school classrooms built in permanent materials	TBD			60%	Building classrooms	Districts
17	Students being taught in a conducive environment	Percentage of primary school classrooms built in permanent materials	65%			100%	Building classrooms	Districts

⁶ These are the figures for 2008

	OUTCOME	INDICATOR	BASELINE 2007	TARGET 2019	ACTIVITIES	LEAD AGENCY
18	Education provided with sufficient funds.	Public Expenditure on Education as % of total Government Expenditure			Submit budget estimates	DOE – F and B
E	EQUITY					
19	Equal opportunities for both boys and girls	Gender Parity Index in basic education	0.91	1.00	Awareness	DOE
20	Equal opportunities for all Papua New Guineans regardless of disability.	Percentage of Children with Special Educational Needs enrolled in schools.	TBD ⁷	TBD	Provision of teacher education opportunities	DOE - TED
21	Equal opportunities for all Papua New Guineans regardless of location.	Difference in Prep to Grade 8 NER between highest and the lowest provinces	58%	10%	Establish sufficient schools	Districts
22	Equal opportunities for all Papua New Guineans regardless of location.	Difference in Prep to Grade 8 NER between highest and the lowest districts	57%	25%	Establish sufficient schools	

Other indicators will be developed to be included in the annual action plans and budgets for planning purposes – these could include:

1. Out-of-School Children
2. Children who never attended school
3. Percentage of private enrolment
4. Other educational and institution facilities (libraries, laboratories, teacher houses, water and sanitation facilities, etc.)

⁷ There is still much to be done to determine the number of children with special needs in the population and then the numbers attending school. At present only those attending the Special Education Resource Centres are counted.

ANNEX A: Enrolments by Gender Elementary, Lower and Upper Primary School

Elementary School Enrolments by Gender, 2010-2019

Year	Prep			Grade 1			Grade 2			Totals		
	M	F	T	M	F	T	M	F	T	M	F	T
2010	96,952	89,494	186,446	85,752	79,156	164,908	69,679	62,536	132,214	252,383	231,186	483,569
2011	107,692	99,408	207,101	95,013	87,704	182,718	84,037	77,573	161,610	286,743	264,686	551,429
2012	110,149	101,676	211,824	105,539	97,420	202,959	93,113	85,950	179,063	308,800	285,046	593,847
2013	115,329	106,457	221,786	107,946	99,642	207,588	103,428	95,472	198,900	326,702	301,571	628,273
2014	120,711	111,425	232,136	113,022	104,328	217,350	105,787	97,649	203,436	339,520	313,403	652,922
2015	121,791	112,423	234,214	118,296	109,197	227,493	110,762	102,241	213,003	350,849	323,861	674,710
2016	122,840	113,390	236,230	119,356	110,174	229,530	115,931	107,013	222,943	358,126	330,578	688,703
2017	123,853	114,326	238,178	120,383	111,123	231,505	116,968	107,971	224,939	361,204	333,419	694,623
2018	124,828	115,226	240,054	121,376	112,039	233,415	117,975	108,900	226,875	364,179	336,165	700,344
2019	125,763	116,089	241,851	122,331	112,921	235,253	118,948	109,798	228,746	367,042	338,808	705,850

Lower Primary School Enrolments by Gender, 2010-2019

Year	Grade 1			Grade 2			Grade 3			Grade 4			Grade 5		
	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T
2010	13,925	12,854	26,779	18,301	16,425	34,725	70,802	62,008	132,809	64,567	55,060	119,627	55,356	47,086	102,442
2011	9,283	8,569	17,852	13,347	12,320	25,667	74,555	67,036	141,591	66,471	58,203	124,674	57,707	50,101	107,808
2012	4,642	4,285	8,926	9,098	8,398	17,495	82,662	76,304	158,966	69,912	62,855	132,766	59,492	52,718	112,210
2013	0	0	0	4,549	4,199	8,748	87,003	80,310	167,313	77,678	71,703	149,381	62,841	56,835	119,677
2014	0	0	0	0	0	0	91,724	84,668	176,391	81,674	75,391	157,065	69,979	64,596	134,576
2015	0	0	0	0	0	0	103,671	95,696	199,367	87,266	80,553	167,820	75,618	69,801	145,419
2016	0	0	0	0	0	0	108,546	100,197	208,743	99,945	92,257	192,202	82,982	76,599	159,581
2017	0	0	0	0	0	0	113,612	104,873	218,484	106,019	97,863	203,882	97,543	90,040	187,583
2018	0	0	0	0	0	0	114,629	105,811	220,440	110,966	102,430	213,397	103,471	95,512	198,983
2019	0	0	0	0	0	0	115,616	106,722	222,338	111,960	103,348	215,307	108,300	99,969	208,269

Upper Primary School Enrolments by Gender, 2010 -2019

Year	Grade 6			Grade 7			Grade 8			Total		
	M	F	T	M	F	T	M	F	T	M	F	T
2010	51,409	42,704	94,113	45,100	36,876	81,977	40,420	33,264	73,683	359,879	306,276	666,155
2011	49,575	42,061	91,636	46,675	38,946	85,621	40,561	33,934	74,496	358,174	311,171	669,345
2012	51,700	44,801	96,501	45,507	38,749	84,256	42,155	35,852	78,007	365,168	323,961	689,129
2013	53,914	46,715	100,630	47,978	41,687	89,666	41,198	35,618	76,815	375,162	337,068	712,230
2014	57,421	49,750	107,172	50,079	44,400	94,479	43,453	38,189	81,642	394,330	356,995	751,325
2015	64,725	59,746	124,471	53,374	48,286	101,660	45,463	40,615	86,078	430,118	394,698	824,816
2016	72,141	66,592	138,733	62,025	57,254	119,278	48,541	44,080	92,621	474,181	436,978	911,159
2017	81,582	75,307	156,889	69,831	64,460	134,291	56,499	52,153	108,651	525,086	484,695	1,009,782
2018	95,898	88,521	184,419	79,951	73,801	153,751	68,435	63,171	131,605	573,350	529,246	1,102,596
2019	101,725	93,900	195,626	93,980	86,751	180,730	78,352	72,325	150,676	609,932	563,014	1,172,947